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PROPOSED EXTENSION OF THE SOCIAL SECURITY PROGRAM, WITH SPECIAL REFERENCE TO HEALTH AND MEDICAL ASPECTS*

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HISTORICALLY, it is peculiarly fitting that this conference should consider the health aspects of social-security plans. It was here in Massachusetts that the public-health movement of the United States received much of its first great impetus. And it is especially significant that in the classic *Report of the Massachusetts Sanitary Commission* (1850), Lemuel Shattuck saw and showed clearly not only the interrelations among poverty, sickness and dependency but also the potential role of health services in the welfare of society and the pursuit of happiness.

In the ninety-three years that have elapsed since the appearance of the Shattuck report, there have been advances in environmental sanitation and other aspects of public health that have transformed society. Medicine has become a science and has attained high levels of effectiveness. But it remains to organize the health services so as to assure the availability of modern medical services to all who need them and can benefit from them. The proper test is not that health is better today than it was a decade or a generation or a century ago or than in some other country, nor that medicine and public health accomplish more now than they did then. By such comparisons, health provisions were good in 1900 and perhaps even in 1850. The valid test is whether we do well and effectively today what we know how to do and can do. By this test there is no ground for complacence.

For this audience it is unnecessary to review the fundamental importance of health measures and of medical care in the prevention of destitution and in the building of a strong and democratic society. You see in your own work the extent to which sickness, disability and postponable death destroy the economic independence of persons and families. You know that much suffering and dependency could have been prevented by adequate and timely service. You are aware of the opportunities for therapy or rehabilitation that are missed because there is no way of paying for needed services. Those of you who have been especially concerned with the problems of children know to what extent society is failing to utilize modern medicine to protect and strengthen the generation that will soon inherit this country.

The public was shocked by the number of young men — about half of the first 3,000,000 called up to serve in the armed forces — who were rejected because of diseases and physical defects, many of which could have been prevented or were still remediable. There is a widespread and insistent public demand that these and similar conditions shall not continue: that this country shall come into the heritage of health services and health security made possible by the progress of science and the wealth of the Nation's resources. This demand has not come primarily because of new or startling discoveries in the laboratory or clinic. It has emerged, by almost imperceptible degrees, from public education — from knowledge of what modern medicine can do through effective and general application, and from awareness that there are ways of accomplishing such application. It is therefore not surprising that the demand for strengthened and broadened health services takes practical form within the framework of plans for social security.

The fullest measure of security rests on the assurance of opportunity to work and earn a living in an economy organized to produce abundantly. To whatever extent this goal is met, social security must also include provision for continuity of income during periods when family livelihood is threatened by sickness or by the unemployment or premature death of the breadwinner, or by his disablement or retirement in old age. World-wide experience has shown that social security in this narrower sense of income maintenance can be most effectively attained through comprehensive contributory social-insurance measures supplemented by public assistance to meet individual needs. New plans for social security will not be complete or economically sound unless they include measures designed to make avail-

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able to every member of the community certain basic services — among the most important of which are the health services.

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The objective of an adequate health program for these times can be simply stated. There must be assured for all persons access to all essential services, including both preventive and therapeutic services, according to the medical need and without regard to their ability to pay at the time the services are received.

With some important exceptions to be mentioned later, this country has in peacetime a nearly adequate volume of medical facilities and a nearly adequate number of physicians. Unfortunately, neither the facilities nor the medical personnel is distributed throughout the country entirely in relation to the need for services. Moreover, the existing resources of facilities and personnel are not in fact available to large numbers of persons who cannot surmount the barrier of costs that stands between them and the doctor, the laboratory or the hospital. Large numbers of persons go without badly needed care, hesitant to undertake financial burdens or, where these are available, reluctant to accept charity or free services. The practice of modern medicine, moreover, calls for the use of a variety of necessarily costly laboratory technics and specialized skills and equipments that are not available in the office of the ordinary physician. With every passing year, medicine becomes a more intricate and more complicated science, demanding the co-ordinated skills of general practitioners, specialists, laboratory technicians and the hospital. The modern medical schools train young men and women to practice co-ordinated medicine, as members of groups and teams. Yet — outside hospitals — medicine continues to be practiced primarily by more or less isolated persons. Although organized practice develops, its growth is at less than a snail's pace. Each advance in medical science underscores the need to solve problems relating to the costs of medical care and the need to co-ordinate services.

The financial solution — access to needed services without barriers of cost — may be attained through either of two major patterns. Both community health services and personal medical care may, like education, be provided as a public service. According to this pattern, governmental agencies would finance the program from general tax revenues, and would provide all needed facilities and hire all needed personnel. Every member of the community would be entitled to call on these services to whatever extent he needed them. This would be "public medicine" or "state medicine" — using these as descriptive terms rather than as emotional epithets. There is a great deal of "public medicine" now, and its volume grows steadily.

On the other hand, the community health services alone — sanitation, control of communicable diseases and other public-health measures — might continue as government services, supported from general taxation, whereas medical services for the individual would be provided through a contributory social-insurance system. In this case, medical care would be financed through regular contributions to a social-insurance trust fund made by all employed workers — whether self-employed or employed by others. These contributions would entitle insured workers and their dependents to receive all needed services without further payment; the doctors, laboratories, hospitals and other groups would be paid for their services by the social-insurance fund. Contributions might also be made on behalf of other groups in the population, — social-insurance beneficiaries, recipients of public assistance, persons engaged on public works projects and persons in the armed forces, — who would thus become members of the social-insurance system and entitled to medical care on the same basis as workers who had contributed from their earnings. Thus, virtually the entire population would receive medical services through the social-insurance system.

It will be readily appreciated that the first of these two major alternatives — public medical service — would involve the more extensive changes in present medical practice. Many persons argue that because it offers the greater — perhaps the only — assurance that medical care will be available to everybody who needs it, public medical care is the alternative to be preferred. In countries where modern medical facilities and trained personnel are limited, government provision of hospitals and clinics and operation of these facilities with salaried medical personnel may offer the greatest promise of speedy and effective health protection. For the United States, however, it might not be considered so practicable or, at any rate, so acceptable a pattern.

At all events, directing my attention primarily to social-insurance possibilities, I shall not explore farther the possibilities of a general public medical service. I shall discuss at this time only the question whether all the major objectives can be achieved through co-ordinating community health services provided by general tax funds and individual medical care financed through social insurance. A properly designed social-insurance system, built on existing medical practices and arrangements, can assure access to needed medical services for 90 per cent or more of the population at the outset, and eventually for every group that should obtain those services through the system. Such a plan would have a solid financial foundation.

The medical services of a comprehensive social-insurance system should, of course, be co-ordinated with cash benefits, which assure continuity of income when earnings are interrupted by temporary or permanent disability, thus providing the means of

subsistence without which medical care may be meaningless.

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If the objectives discussed earlier are to be achieved, the social-insurance system must cover all workers. Building on the present old-age and survivors' insurance system, it might be said that in addition to the employments now covered, it should include agricultural labor, domestic service, government employment, employment for nonprofit institutions, self-employment in both agriculture and business and miscellaneous employments now excluded. With such a coverage, the insured workers and their dependent wives and children would normally constitute about 85 per cent of the population. As suggested earlier, other persons — such as the needy and the social-insurance beneficiaries — might be qualified to receive medical care through contributions to the social-insurance system made on their behalf.

Under a unified social-insurance system of which medical-care insurance was a part, there would need to be only a single contribution to the insurance fund for all types of benefits. Employers would submit one pay-roll report, and self-employed persons a single report of income. The same earnings records would serve for determining rights to any type of benefit. The funds available for particular types, however, might be segregated. It would probably be necessary to set aside a definite proportion of the contribution income to pay for medical services.

Ideally, the social-insurance system should include provision for any needed medical service — services of the general practitioner and the specialist, use of laboratory and x-ray facilities, hospitalization, dental care, home nursing and prescribed drugs, medicines and appliances. At the outset, however, it might be necessary to provide more limited benefits — not because people are unwilling to pay for all types of services, but because facilities and trained personnel are lacking to furnish some of the services to all persons who need them and who would seek them if the present barriers of cost were removed. This is the situation particularly with respect to dental care. Home nursing presents similar problems, in addition to the need for extensive adjustments in the arrangements under which the service would be furnished. Consequently, it would be wiser to omit these services at the outset, but to provide for their inclusion as soon as practicable. It may also be undesirable for the social-insurance system to meet the costs of any except unusually expensive medicines and appliances.

With these limitations, the insured worker and his family would still have access to a group of medical services that lend themselves to sound integration: care from the family physician, together with specialist services, laboratory and other diagnostic and therapeutic facilities, hospitalization and unusually expensive prescribed medicines and appliances. This limited program provides a suitable base from which to build toward the more comprehensive provisions. Initially, an amount equal to 3 per cent of pay rolls would probably suffice to furnish insured persons with the guaranteed services and commodities, and to provide adequate remuneration to doctors, hospitals, laboratories and others.

In a nationwide, comprehensive system of social insurance there must be central determination of policies and standards to assure equitable treatment of all members of the system. But the actual administration of the social-insurance benefits should be highly decentralized. Benefits would be claimed at or through local social-insurance offices, and all determinations requiring knowledge of local conditions or personal circumstances should be made in the local communities.

In the case of medical-care benefit, it is particularly important to distinguish between the functions of centralized policy making and decentralized operation. In the first place, the social-insurance system would build on existing facilities, personnel and arrangements, utilizing existing practitioners, hospitals, laboratories and other personnel and facilities. It need not and should not interfere in any way with the essential professional aspects of medical practice or with the internal management of hospitals.

If medical-care benefits were to become available, most persons who had a family physician would presumably continue to go to him. Others would select a physician from among all those available in the community. The only essential change that the insurance arrangement makes between physician and patient is in the method of payment. Instead of paying for medical service at the time it is received — when perhaps he can least afford it — or incurring a heavy debt, or unwillingly accepting free care or going without needed care because he cannot pay, the insured worker would pay for medical care for himself and his family by small deductions from his earnings when he is employed. Instead of each family's carrying the cost of its own care, whether that cost were extremely light or unbearably severe, every worker would pay only his proportionate share of the average cost. Every employed person can afford to contribute an average percentage of his earnings; it is the unequal incidence of medical costs that makes them a burden to the individual and a threat to family security.

Just as each worker could choose his physician from among all licensed practitioners of medicine who wished to participate in the insurance arrangement, so every physician would have the right to accept or reject patients. Social insurance would enable the physician to engage more fully in the practice of medicine, utilizing all modern technics and laboratory aids, and calling on specialists for

advice or service when needed, without concern for the patient's inability to pay. The physician would also know that he would be paid for all his services to insured persons.

The arrangements to pay physicians might take several forms, among which those in each locality would choose whichever they preferred. Physicians might be paid according to established fee schedules for each home visit, office visit and so on. Fee schedules could be uniform for the entire country or might vary from one region or place to another, taking account of variations among communities in customary fees and in overhead costs of practice.

The method of payment that has come to be preferred by physicians in Great Britain, after considerable experience with fee schedules, is known as the capitation method. Under this method the physician receives a fixed amount per year for each person who chooses him, whether he is called on to give much or little or no service to any particular patient during the year. This method requires that every insured person specify his intention to be on some physician's list. So that physicians will not lose income to which they are entitled, capitation payments are made not only for those who have chosen a physician but also for those who have not. Such payments and adjustment are, of course, made locally and not from the central office.

Physicians who so choose might be paid on a salary basis, whole time or part time; or a combination of various methods might be used. Provisions should also be made for equitable payments to organized groups of physicians.

The hospitals, like the physicians, should be free to choose the method by which they would be paid. In discussions that we have had with hospital administrators and official committees of the hospital associations, it has been generally agreed that payment should be made direct to the hospital, whether by assignment of a fixed benefit amount for each day of hospitalization or by payment of the reasonable cost of minimum necessary services, within fixed minimum and maximum limits. The method of payment to hospitals should not and need not interfere in any way with the hospital's control of its own customary management and affairs.

With such a general framework for medical services furnished through social insurance, the current pattern of professional relations among people, doctors and hospitals would not be changed in any basic way. This is the virtue of health insurance to those who wish to build by slow and measured evolutionary processes on the status quo.

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If the approach to a health-insurance plan is primarily with respect to existing financial problems, the tendency is to leave treatment of the qualitative problems largely to the operation of forces and trends working within the professions. This is not to say, however, that an insurance plan designed along these lines should be or can be indifferent to the need for safeguarding and constantly improving the quality of services provided as insurance benefits. On the contrary, when contributions are compulsory, government cannot avoid responsibility for the quality of the benefits.

In a system that builds on the existing and available resources in professional personnel, hospitals and other facilities, I suggest that at least the following six provisions are essential to protect and promote the quality of the medical services: access to necessary specialist and consultant services; special rates of payment for services of the specialist when furnished by physicians who meet professional standards certifying their special skill; access to necessary laboratory and related aids to diagnosis and treatment; payments for hospital care furnished in institutions that meet medical and hospital professional standards applicable to institutions offering general or limited varieties of service; specifications that aid the development of organized group practice and co-ordinated medical, hospital and community health services; and financial support for professional education and for research.

In establishing professional standards, the insurance system should obviously be expected to lean heavily on standards developed by professional organizations. A competent advisory council, with adequate professional representation, would be essential.

The professional specialty boards have already done basic spadework in certifying most of the qualified specialists in medicine. Large problems remain, but desirable solutions can undoubtedly be found by administrators working in close collaboration with advisory bodies.

In designating hospitals entitled to receive payments, the social-insurance system may be guided by existing accrediting procedures long accepted by the Nation's hospitals. Institutions that cannot meet all the standards applicable to large urban or metropolitan hospitals might nevertheless be accredited for all or limited varieties of cases, if their service were adequate to promote the health and safety of the hospitalized persons. The social-insurance system might also encourage the development and use of qualified institutions for the care of the chronic sick or of corresponding facilities associated with general hospitals, thus providing more appropriate treatment for chronic patients and reserving the more elaborate and more expensive facilities of the general hospital for acute cases.

General policies for the acceptance of participating hospitals, the designation of specialists and the arrangement for paying doctors and hospitals should be determined centrally for the social-insurance system. These are functions of the administrator, guided or directed by consultations with appropriate professional and other advisory bodies. Appli-

cation of those policies, however, should be carried out through a thoroughly decentralized administration, operating at every level of administration, from the central to the local, with the help of advisory bodies that include representatives of the persons who furnish and those who pay for the benefits.

I have stressed the point that a social-insurance system would be built on existing facilities and existing arrangements for medical care, changing primarily the methods of payment. I do not wish, however, to give the impression that the health services would remain in their present stage of development. By striving to give every physician access to all necessary diagnostic and therapeutic aids in the treatment of every patient, whatever that patient's economic circumstances, the system would advance the practice of medicine toward the standards that now prevail in the better hospitals and clinics. By removing the barriers of cost that today cause many persons to postpone seeking medical advice, it would stimulate early diagnosis and treatment and thus aid in the prevention of much illness and disability. By guaranteeing physicians fair payments for their services, it would enable them to practice in areas and communities that at present cannot provide them with a decent living. By guaranteeing payment for hospital service, it would encourage the building of hospitals and health centers in communities that can find the capital funds for such construction if they are assured of a continuing operating income.

There is an additional obligation to take certain direct measures to improve the adequacy of existing health and medical services. Either from the social-insurance funds or from other public funds, money should be made available to construct hospitals and health centers in communities that cannot raise the necessary capital. Moreover, as indicated before, to advance the skill and knowledge that will promote prevention of disease, and to assure progressive improvement in the quality of medical care, the social-insurance system might properly set aside a small fraction of the income from contributions for the support of research and of professional education and training.

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Among physicians who accept the need for medical-care insurance, some will criticize the plan outlined here as far too conservative and too timid. In particular, this group will object especially to permitting fee for service as one method of payment.

There is little doubt that some of the most serious deficiencies of present-day medical practice result from the fee-for-service method of payment, because it discourages early, preventive or adequate care — especially among people of modest means — at the same time that it puts a premium on excessive treatment in some cases and inadequate treatment in others, and on various types of fee-splitting practices. Some of these objectionable features would be carried over into the insurance system, despite precautions that might be taken. Although the patient would no longer be barred from needed services, there would be a risk that some physicians would load unwarranted service charges on the insurance fund. Since the aggregate amounts available for all payments to physicians would be limited, the result might be a competition for patients and for volume of services almost as inimical to professional standards as that which occurs today. Through the downward prorating of physicians' bills if they are excessive, the insurance fund can be protected against extreme unwarranted costs. For the rest, the problem would be largely a matter of intra-professional controls.

Practitioners here, like those in Great Britain, would probably turn to a capitation or a salary basis of payment, because they would learn by experience that these methods are more satisfactory for them as well as for their patients. Nevertheless, I do not agree that the insurance system should bar the fee-for-service method. So long as a majority of physicians prefer or insist on a fee basis, it should be accepted by the social-insurance system. At the same time, it should give full opportunity for the development of organized group practice where this arrangement is preferred by physicians and insured persons. In other words, the insurance system should build on what now exists, and at the same time should build toward better arrangements by leaving latitude for change and improvement as rapidly as change is desired by or is acceptable to those who are most concerned.

Certain misleading criticisms of medical-care insurance that are being broadcast across the Nation can be dismissed in a few words.

In the first place, medical benefits furnished through social insurance are not "free medicine" or "free care." It is of the essence that social insurance is contributory, and that people pay for what they get.

In the second place, expenditures for medical care through social insurance need be no greater than the amounts the population already spends in a hit-or-miss fashion. In supporting a larger volume of service and better service, more would be spent for the types of service included as insurance benefit than is customarily spent. Such an increase would be offset by savings from curtailing present levels of expenditures for useless services and services now furnished uneconomically. Moreover, paid in regular, budgeted and average amounts, the insurance costs would not be burdensome or catastrophic for anyone, even if in the aggregate they were somewhat larger than the total amount now spent individually for medical care. They would be absorbed in an orderly fashion into the streams of the social economy, just as the contribution costs of workmen's compensation, old-age and survivors in-

surance and unemployment compensation have been absorbed.

Thirdly, the medical-insurance system would not destroy the private practice of medicine. It would strengthen and preserve its really essential elements — competition for patients or for annual income on the basis of satisfactory service, not on the size of a fee; free choice of his physician by the patient and the right to change to another; the right of the physician to accept or reject patients; the right — and also the obligation — of the profession to participate in the determination of all matters of high policy that affect medical practice; and the opportunity of the practitioner to be wholly concerned with his patient's medical needs irrespective of the latter's pocketbook.

Fourthly, the medical-insurance system would not weaken or destroy the voluntary-hospital system. On the contrary, it would preserve to these hospitals their control over their own institutions and would guarantee them increased and assured continuity of income so that their services to the public could be larger and better.

Last of all, the medical-insurance system need not and should not ignore noninsured needy persons. As pointed out earlier, through payments made on their behalf by public agencies, the needy could be made entitled to the services provided for self-supporting families. Thus, one class of service would be available for all, with dignity and self-respect for the patients, whereas physicians would be released from the concern to distinguish pay from part-pay and free patients. This arrangement would be more satisfactory than present or prospective programs of medical assistance, even with the improved financial arrangements under the Social Security Act already recommended by the Social Security Board.

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With what assurances or what hopes can one look forward to more adequate health protection than the people of the United States now have?

The formulation of objectives and methods is only the beginning. A specific program of action was recently proposed to Congress through a bill (S. 1161) introduced in the Senate by Senators Wagner and Murray and in the House (H.R. 2861) by Representative Dingell. This bill is notable in that for the first time it sets forth a comprehensive national program of contributory social insurance, including provisions for medical care in sufficient detail to provide a basis for public discussion. Submitted by its sponsors not as a final blueprint but as a basis for public discussion, its proposals deserve and invite thorough consideration, reasoned debate and constructive criticism.

I believe that the great majority of the people of this country know that the objectives of medical-care insurance are sound; they want more nearly adequate service and are prepared to pay for it. The public and all the agencies of the Government most directly concerned — legislative and executive — need the help of persons with a professional background and knowledge to bring to light what is unsound in any specific plan that is proposed, and to discover what sound and constructive changes are desirable.

There is not much time for public education and discussion if the opportunity of achieving a comprehensive and well-designed system of social security in our time is to be grasped. If action is postponed until the potential disruptions and crises of the postwar period are upon us, we may find ourselves with a hastily devised and inadequate relief program, rather than a soundly conceived social-insurance system. Once the general principles of a social-insurance program have been agreed on, time is needed to work out detailed plans and procedures and administrative machinery. It would probably be possible to move fairly rapidly in extending the cash-benefit system, for which a substantial framework already exists. No responsible administrator would, however, want to begin operation of a medical-care-insurance plan until he had had adequate time for consultation with all the professional and lay groups whose interests and knowledge and skills should be utilized in developing detailed policies and procedures.

A period of full employment like the present is the most favorable time for initiating a contributory social-insurance program. The initial impact of the contributions can be more easily borne by workers and employers than at any other time. The new contributions will have a deflationary effect on the social economy whenever a beginning is made. Deflationary pressures are needed now; they might not be wise in the immediate postwar period.

If social-insurance coverage is extended to all types of employment during the war, the great majority of the workers will come to its end with rights to cash benefits for themselves or their dependents in case of unemployment, sickness, disability, retirement or death, and with access to medical care for themselves and members of their families. If extension of the system is postponed until a period of limited employment, it may be years before large groups of workers can qualify for insurance protection.

If it is decided now that medical-care insurance is wanted, and if the detailed plans are developed now, the tens of thousands of physicians and surgeons who are serving in the armed forces will, on their return, find opportunities for civilian service, with more latitude for choice as to how and where they will serve than they have had before. If each returning physician must make his way back into practice wherever his chances seem best for establishing an adequate livelihood, it may take a long time to bring

about a relocation of physicians and medical facilities in accordance with the needs of the population.

Now — before the war ends — is the time to plan the peace for the years ahead. Such planning must be world-wide. But it must also be national and local. And it must comprehend not only political security but economic and social security — freedom from want and from the fear of want — in order that men may live lives of dignity and human worth. Social security thus appears as a necessary condition for men to be free and independent.

There is increasing recognition that health protection would be among the most valuable, the most potent for the future, of all the benefits from a comprehensive program of social security.

THE BLUE CROSS, THE BLUE SHIELD AND THE WAGNER-MURRAY-DINGELL BILL*

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PREPAYMENT insurance for protection against the cost of sickness is generally accepted as sound. The hospital plans of the Blue Cross, started a little over ten years ago, now operate in thirty-six states and the District of Columbia, which contain 87 per cent of the population, with over 13,000,000 subscribers. The medical plans of the Blue Shield started later, are now operating in thirteen states, which contain 50 per cent of the population. Both organizations are growing rapidly, with subscribers from both urban and rural areas. Both are on a voluntary basis and are nonprofit organizations operating under the direction of state insurance commissioners but controlled by directors, a majority of whom are representatives of hospitals in the case of the Blue Cross, and physicians in the case of the Blue Shield. Thus, both are directed by those most interested in the success and progress of these bodies.

There is not much use in proclaiming the virtues of something that is already accepted as admirable. Almost everybody agrees that the Blue Cross and the Blue Shield are good. But are they good enough? Many persons believe that they *are* sufficient to meet the need of a method of protection against hospital and medical costs and that they will gradually expand geographically to cover all parts of the United States and will add benefits to cover all medical needs. Admittedly, this will be a gradual evolutionary process, elastic enough to fit every area and every changing need.

Others say that voluntary plans, dependent on personal volition, will never adequately protect the community against sickness. They hold that such plans are too slow in operation, pointing out that in ten years only 13,000,000 out of a possible 80,000,000 persons have availed themselves of the Blue Cross; that many who need protection will never avail themselves of it; that the Blue Shield is too limited in benefits to give satisfactory protection; and that it will be necessary either to supplement voluntary plans with compulsory plans or, better still, to replace these imperfect voluntary plans by a comprehensive, compulsory plan embodying medical care in the home, office and hospital, together with such hospital care as is needed.

We are now called on to face this problem of the comparative merits of voluntary and compulsory health insurance through the submission to Congress of the Wagner-Murray-Dingell Bill, which proposes such a system of compulsory health insurance as part of a unified national insurance system for the entire United States.

What is the Wagner-Murray-Dingell Bill? To estimate its value intelligently, which incidentally will help one to decide on the merits of voluntary and compulsory insurance, one must at least understand its essential provisions. For the purpose of this discussion the following are the most important factors. The introduction to the bill reads as follows:

> To provide for the general welfare; to alleviate the economic hazards of old age, premature death, disability, sickness, unemployment and dependency; to amend and extend the provisions of the Social Security Act [that is, the Act passed in 1935]; to establish a unified national social insurance system; to extend the coverage and to protect and extend the social security rights of individuals in the military service [they are not protected now]; to provide insurance benefits for workers permanently disabled; to establish a federal system of unemployment compensation, temporary disability, and maternity benefits [now under state control]; to establish a national system of public employment offices; to establish a federal system of medical and hospitalization benefits [this is the item in which we are vitally interested]; to encourage and aid the advancement of knowledge and skill in the provision of health services and in the prevention of sickness, disability and premature death [this is extension of public-health services and financial assistance to medical schools and medical research]; to enable the several states to make more adequate provision for the needy aged, the blind, dependent children, and other needy persons; to enable states to establish and maintain a comprehensive public assistance program; to amend the Internal Revenue Code.

Concerning the intent of this bill to improve living conditions in the United States and to make this a happier land, there can be no doubt and no opposition. The question is whether the method will accomplish the results desired. To determine this the general principles underlying the operation of the provisions of the bill must be reviewed and its specific measures examined. The primary concern here is with the medical and hospital section.

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Perhaps the most important item in the bill is that of federalization. Can the federal government do this better than state governments? In some ways it can; for instance, such federalization assures similar application in benefits in all states, whereas at present there is variation in the action of security boards in different states. On the other hand, can a centralized organization ever understand and adjust its rulings and methods to meet satisfactorily the varying local conditions of forty-eight states? Will the resulting bureaucracy that must of necessity be created by such federalization further accentuate the already alarming number of federal employees, with the corresponding dangers of political patronage and the party coercion of voting powers?

Certainly this bill presents a fascinating blueprint of governmental paternalism, professing a most kindly interest in the economic welfare of its citizens and setting up an attractive medical and hospital structure to provide for care in sickness and to develop preventive measures. Again, there can be no quarrel with the desirability of the goal or the intent; the only question is whether the result can best be obtained in this way. It is a pretty picture, but is it a true one?

What are the essential points of the medical and hospital section? Title IX provides:

> Every individual who is currently insured and has been found by the Board to be eligible for benefits under this title in a current benefit year, shall be entitled to receive general medical [that is, medical care in home, office or hospital], special medical [that is, care by surgical and medical specialists in home, office or hospital], laboratory and hospitalization benefits.

Moreover, all dependents of the insured receive the same benefits.

The administration of all this is placed under the Surgeon General of the Public Health Service, who is authorized to negotiate agreements with appropriate agencies of the United States, or of any state or public or private agencies, or with private persons, to utilize their services and to pay fair, reasonable and equitable compensation for them; that is, he may select physicians, specialists and hospitals. The National Advisory Medical and Hospital Council is set up with the Surgeon General as chairman and with sixteen members appointed by him from a panel of names submitted by professional and other agencies and organizations connected with medical services and education and with the operation of hospitals, and from other organizations informed on the need for or the provision of medical, hospital and related services and benefits. This council is authorized to *advise* the Surgeon General. All physicians legally qualified by a state shall be qualified to furnish services; that is, if they wish to and are accepted by the Surgeon General. Every person may select his physician from those accepted by the Surgeon General, subject to the consent of the practitioner selected; that is, there is a free choice of physicians. Specialists, however, shall be named by the Surgeon General, and their services shall "ordinarily be available only upon the advice of the general practitioner."

A fee schedule shall be set up by the Surgeon General, established on a per capita basis or a salary plan, or a combination of these — a provision that places great power in the hands of the Surgeon General. He may also limit the number of potential beneficiaries for whom a practitioner may undertake to furnish general medical benefits or distribute them, if the per capita plan is used, on a pro rata basis among practitioners. Thus he can control the amount of work any physician may do as regards this plan.

In a similar manner the Surgeon General shall select participating hospitals. The bill fixes the amount that may be paid for hospital services, to be "not less than $3 and not more than $6 per day for thirty days" and after that "not less than $1.50 nor more than $4." Payments are made to beneficiaries who, however, *may* assign their benefits to hospitals.

What are the general premises and principles involved? What are the underlying needs for such a bill? The Committee on the Costs of Medical Care pointed out that there are four groups of people. The first includes the rich or well to do, who have ample resources to meet the costs of medical and hospital care, with incomes of $5000 and over. They form 9.2 per cent of the population. The second is the middle class, with incomes of $2000 to $5000, forming 35.5 per cent of the population. Voluntary plans have appealed to this group. Third comes the wage-earning group, with incomes from $1000 to $2000, forming 41 per cent of the population. Proponents of compulsory insurance believe that this class will never take out much voluntary insurance and must be compelled to protect itself through compulsory insurance. The fourth group comprises the indigent — persons with incomes below $1000, forming 14 per cent of the population. Many of these are unemployable and will never be able to contribute adequately to any plan; they must be assisted by welfare and given medical and hospital care at public expense.

The difference of opinion regarding the third group is the crux of the matter. Proponents of compulsory insurance believe that these people will never take out much voluntary insurance and must be compelled to protect themselves and thereby the community, through compulsory insurance. Those favoring voluntary methods say that given adequate wages and time to acquaint themselves with the benefits of voluntary insurance and to understand it, this group will rise to the occasion. They cite the facts that most of the automobiles, electric refrigerators, radios, homes and furniture are bought on an installment plan, — that is, by budgeting, — and that people who voluntarily do this are also

bright enough to see the advantages of prepayment health insurance. They also point out that there is an advantage to the community in the development of personal initiative of this sort, of which more later. In rebuttal, the compulsory group says that this plan might work with high wages, but questions its effectiveness in periods of depression. So far as the wage-earners' contributions go, if they are out of work or are on mere subsistence wages neither plan will work, although the compulsory plan has advantages, since it includes the contribution of the employer and the possibility that the government will also assist through contributions from general taxation, thus gaining support from three sources instead of only one. It is well to remember, however, that all the money eventually comes from the taxpayer, be he rich or poor. There is validity to the arguments of both sides; it is a matter of relative values.

One of the principles of democratic government is that "the Government should do only those things that the people cannot do." Wendell Willkie said in his speech at the opening of the Greater Boston United War Fund campaign:

> Totalitarianism has an insidious and sinister appeal — an appeal that is by no means limited to those nations where it is completely dominant. It appeals to those who prefer leadership to initiative, blueprints to enterprise, a blind following to freedom. It appeals to those who find it difficult to bend democracy to serve their economic or political self-interest.

The United States was founded on the principle of personal initiative and the participation of its citizens in the affairs and machinery of their *government* as well as in the prosecution of their livelihood or business. This country has been developed through personal enterprise and initiative, and I, for one, do not believe that the end of the possibilities of these factors has been reached. For instance, the people of Greater Boston pledged $15,000,000 to the Greater Boston United War Fund in 1943 — a voluntary effort.

Civilization forces restrictions on the initiative and freedom of individuals, but these restrictions are accepted by all but the criminal class, voluntarily and with the understanding and belief that they are for the good of the community and, therefore, for their personal advantage. For example, taxation is a relinquishment of the freedom of spending one's own money as one wishes, as a result of which one obtains certain benefits from the states. Compulsory insurance is a form of taxation. In developing our form of government we have agreed that the Federal Government can do some things better than the states. These activities include the Army and Navy and the protection of the country, the control of currency through the Treasury and the Federal Reserve System, the carrying of mails through the Post Office Department, the Interstate Commerce Commission and the control of epidemics through the United States Public Health Service. It has also been agreed that states can do some things better than cities. These activities include general laws affecting all residents of the states, the general direction of education, the licensing of doctors, lawyers and nurses, workmen's compensation laws, the care of tuberculous and mental patients (sanitation and state boards of health) and roads and other public works. Lastly, it is agreed that cities and towns can regulate best police and fire departments, local health and welfare matters, schools and local public works. This is all built on the sound principle that the larger unit shall take responsibility only for those things that it can do better than the smaller — and it should be remembered that it all begins with the individual citizen.

Of course there is a wide variation in what cities or states are willing to do. This gives an uneven distribution of public works, public service, regulating laws and so forth. Public works and service, although they offer benefits, cost money that must be raised by taxation. In general, those communities that have the greatest public services also have the highest tax rates. Those communities that want them must pay for them. Federalization of any project means that some communities will have to pay not only for the public services that they now have but also for similar services in communities that do not have them and are too poor or are unwilling to pay for them. It may be argued that it is just that the richer community should help the poorer, and that by its so doing the whole country is benefited and even the doubly taxed richer community receives adequate benefit through the improvement of its neighbor, but let us recognize what is going to take place.

So much for the state. Now what about the individual; how does taxation affect him? Everyone wants freedom and security: freedom of religion, of speech, of work and of spending; security through protection against want, loss of work and unemployment, provision for old age when earning power is lost, protection of dependents in the event of the death of the wage earner and protection against the cost of sickness and the accompanying loss of income.

Apparently, security can be reached only through the voluntary renunciation of some part of freedom. To achieve security for old age, unemployment and sickness, one must give up complete freedom of spending one's earnings. That is, one must pay for it through taxation or save for it oneself. The question is, How is one to do it? By initiative through savings, or by voluntary insurance, or by legislative enactment, through elected representatives, of compulsory insurance, which is taxation? So much for principles. Now let us take a practical view.

Evolution is terribly slow. Voluntary plans will take a long time; perhaps twenty years will be needed to accomplish what a legislative enactment could accomplish in two years. Many people will

suffer during this period from their own lack of foresight and from imperfect plans. There may always be some improvident people who will never protect themselves, who will spend their money willfully and then fall back on the community as indigents. Legislation is quick, albeit revolutionary. But, it may reasonably be asked, since we are progressing on the voluntary road, Is it necessary to rush things? After all, Rome was not built in a day. Compulsory insurance will apply to all who need it. It will make medical and hospital care available without direct cost at the time of sickness to all who need it, thus overcoming the unpredictable element in sickness as well as the uneven distribution of such care as is necessitated by limitation of income; that is, more people will get more care. It is urged that the loss of freedom and the cost through contributions are more than compensated by returns in benefits and security. A federal unified system will apply equally to all parts of the United States. Those areas with high tax rates can afford, on the basis of public good, to help the poorer areas. Universal benefit will result. What helps one's neighbor will in the long run help oneself. That is a good Christian doctrine, but what will be the cost?

According to the bill, which is based on statistics collected by the Bureau of Research and Statistics of the Social Security Board, the employee will pay to the unified system 6 per cent of his wages, and his employer will also pay 6 per cent of the pay roll. This applies to all wages up to $3000 a year. Approximately one quarter of this total is set aside for medical and hospital benefits or, as it is commonly termed, "compulsory health insurance."

The following figures are only approximate and are not official; they will, however, help one to understand the workings of the plan. The estimated normal income of wage earners in the United States is $100,000,000,000. Twelve per cent of this is $12,000,000,000. Of this, one fourth, or 3 per cent of the total income, is to be set aside for medical and hospital care. Of this $3,000,000,000, one third is to be set aside for hospital care, leaving $2,000,000,000 for medical care. These figures may be too high, but granting a considerable shrinkage it appears that the statistical basis of the plan is reasonably sound and that certainly, so far as hospital costs are concerned, there would be enough money to pay the hospital bills.

How does this apply to the taxpayer? The population of the United States is approximately 120,000,000. The number of wage earners is 30,000,000 or one quarter of the population. With their dependents they total 80,000,000, or two thirds of the population. Take the case of a person earning $2000 a year; 6 per cent of this is $120, which will be his direct contribution or tax. But employers also pay 6 per cent, which in time will be added to the cost of production of every article, and so produce a rise in the cost of living for every one of the 120,000,000 persons in this country. The wage earner must eventually pay his share of this added cost for himself and his dependents, and since they form two thirds of the population, he will pay two thirds of this added cost of living, or 4 per cent of the employers' 6 per cent. Consequently, he will pay 6 per cent of his salary in direct taxes and 4 per cent in indirect taxes, or 10 per cent in all. Therefore, his real contribution will not be $120 but $200. In return for this he will get old-age pensions, unemployment payments, survivor benefits and medical and hospital care. In addition, he must pay his regular direct and indirect taxes to the federal, state and city governments. It is estimated that at present everyone is paying in one way or another between 25 and 30 per cent of his income in taxes. If this bill is passed he will be paying 35 to 40 per cent of his income. Is it not fair to ask how far this taxation, allocation or checkoff on wages can go and still permit the wage earner to maintain initiative and freedom? To be sure, he gets much in return, but one must ask, "What price freedom?"

It is true that this extra 10 per cent will not all be additional, since both employers and wage earners are already contributing to the Social Security Fund. Present social-insurance taxes are as follows: employers, 1 per cent for old-age pensions and survivor benefits and 3 per cent for unemployment compensation; and employees, 1 per cent for old-age pensions and survivor benefits. Thus the employers are paying 4 per cent of the suggested future 6 per cent, but the employees are paying only 1 per cent of it. Therefore, the employee will pay 5 per cent more as his own contribution, plus two thirds of the 2 per cent increase in employers' tax, or a total of 5 per cent plus 1⅓ per cent, or 6⅓ per cent more from his wages than he is now paying.

It is also true that the Social Security Act calls for increases to 2 per cent on January 1, 1944, for both employer and employee to cover old-age and survivor benefits, to 2½ per cent in 1946, and to 3 per cent in 1949. Nevertheless, the point is still pertinent that there will be a substantial increase in taxes taken directly from wages.

The experience of all European plans, of voluntary plans in this country and of university departments of hygiene where students pay a fixed health fee, is that the amount of medical care is increased. Human nature is such that, having contributed, everyone wants to receive some benefit. Granted that more medical care than is now utilized is desirable, it will be well to consider whether the existing number of physicians, nurses and hospitals will be able to meet the demands that will suddenly be thrust on them. This is not an argument against providing more medical and hospital care but rather against a too rapid change from one system to another. After all, medical care is dependent on individual doctors, and hospital care is limited by the extent of hospital facilities. If the amount of

care is to be increased, so must the means of providing it. Promises that cannot be fulfilled lead to exasperation of those who are disappointed. Some check that will control too rapid expansion seems to be indicated.

* * *

If we believe that our present medical and hospital system is satisfactory, that it is developing adequate methods of meeting economic needs, and that it will in a reasonable time supply adequate medical and hospital care to all at costs and by methods within their means, we should oppose the Wagner–Murray–Dingell Bill. If we believe that the present system is unsatisfactory and inadequate and that voluntary plans will never adequately provide medical and hospital care, that the third group outlined above, comprising 41 per cent of the population, will never be satisfactorily protected, we must decide whether we shall achieve this protection through direct general taxation or through compulsory insurance. Between these two choices there is no doubt that compulsory insurance is the better plan. If we decide to have compulsory insurance we may support the Wagner–Murray–Dingell Bill, but, it is to be hoped, with certain important changes. Let us for the sake of argument take the stand that compulsory health insurance is desirable and consider how it would operate under the provisions of this bill.

First of all, there is the problem of federalization of the medical and hospital system; for although the plan begins with qualification of physicians and hospitals by states, if this bill passes it is only a question of time before qualification will become a federal power. Although I deplore in general the concentration of power in federal bureaus, I cannot see anything reprehensible in the federal licensing of physicians and hospitals. I can, however, see great difficulties in centralized bureaus' appreciating and understanding local conditions. There will inevitably be a tendency to set up rules and regulations and to apply them universally, with the result that what is applicable with advantage to conditions in one state may be disadvantageous when applied to different conditions in another state. I can also foresee great possibilities for pressure groups and logrolling deals, since local communities will thereby stand to obtain great benefits at small cost to themselves; witness the efforts to obtain veterans' hospitals.

Without question, the authority granted to the Surgeon General of the Public Health System is too great. Granting the integrity and ability of Surgeon General Parran, and those who have preceded him and will follow him, the concentration in one man of the power to select or reject the physicians and designate or reject the hospitals that may participate in this plan approaches dictatorial powers. May he not under pressure in turn use pressure on these appointees to influence them in their activities, both social and medical, with loss of appointment as the result of nonconformity?

It seems obvious that there must be nonpartisan control of such power. This could be made possible by changing the suggested advisory committee to a directing committee, which would have the authority to determine policies and principles and to direct the Surgeon General and review his acts, and to which he must report. This committee should not be selected by him but should be composed of representatives selected by those national organizations most competent to judge the quality and quantity of medical and hospital care, and most interested in the successful operation of this project. Such a change would adhere to the well-known principle of organization of having a policy-making body, with an executive to carry out its policies and to report to it. This is the organization of the Government: Congress makes the laws; the President carries them out. It is the organization of corporations: the board of directors makes the policies; the general manager executes them. The Surgeon General of the Public Health Service is the logical executive officer to administer the regulations of such a directing committee. He should not be the chairman.

With control placed in the hands of a directing committee composed of physicians, hospital administrators, dentists, nurses and lay representatives of other interested organizations, many of the controversial subjects in this bill could be cared for; for instance, the method of payment, — whether by fee schedule, a panel per capita plan, or by salary, — and the selection of physicians, the designation of specialists, the acceptance of hospitals and the adequacy of payment for hospital service, since the decision on these matters would be placed in the hands of those who would know the facts and understand the conditions and who would be interested in the success of the undertaking. The acquisition and probable misuse of power would be avoided so far as possible. Nor would the effectiveness of administration by the Surgeon General be prevented, because he would be given free scope to carry out the provisions laid down for him.

The next point is one of omission in the bill. The present hospital system has been successfully built on the general principle of government co-operation and supplementation instead of replacement. Government hospitals — federal, state and municipal — co-operate with and supplement nongovernmental or voluntary hospitals in providing care. Furthermore, this system promotes friendly but active competition in producing better care of patients. There should be added to the bill the proviso that membership in a voluntary hospital or medical-insurance plan that provides comparable benefits is acceptable in lieu of compulsory contributions. Compulsory insurance may be required

for others. Admittedly this lays a heavy burden on the voluntary plans, because compulsory plans have the advantage of forced payments from employers. But voluntary plans have the advantage of working under flat rates, which makes them attractive to those earning higher wages. Certainly such a proposition will stimulate competition to see which plan can produce the best results. To compete, the Blue Cross must operate in all states with reciprocity, and the Blue Shield will have to develop rapidly more nearly complete medical benefits. Moreover, — and this is extremely important, — such a provision would adhere to the American principle of encouraging personal initiative and of encouraging thinking and choice on the part of every wage earner. Thereby he becomes a better citizen.

For this bill to be acceptable to most people it must present a rational plan clearly defining how the central regulating federal organization can be decentralized to administer benefits and to adjust general principles and policies to local conditions. Shall this be done by existing state organizations or shall a new board, composed of representatives of all the present state departments involved, with perhaps additions representing interested groups, be set up? A substantial amount of local administration must be guaranteed.

Lastly, it is essential that payments for medical and hospital service be made directly to the physician and hospital and not to the subscriber beneficiary. Only in this way can payment for service be assured. The present permissive statement that beneficiaries may assign payments is not satisfactory.

If legislation is to be enacted it should adhere to certain basic principles: It should disrupt present conditions as little as possible. Therefore, legislation for compulsory health insurance should assist, cooperate with and supplement the present medical and hospital system — not replace it. This means that the principle of private medical practice and voluntary hospital and medical insurance plans shall be specifically recognized and their existence approved. Second, the bill should permit opportunity of choice; that is, the citizen should have a choice between joining a voluntary medical and hospital insurance plan providing comparable protection and accepting compulsory insurance. In other words, membership in a voluntary plan providing comparable benefits should be accepted in lieu of compulsory insurance. Third, the bill should permit the operation on a local basis, through state organization, of principles and policies developed on a federal basis. In other words, there should be federal guidance and control but local application. In no other way can local conditions and variations be successfully understood and met. Fourth, the bill should place control of any health plan in the hands of those most interested and best informed concerning the quality and quantity of medical and hospital care. To this end a governing or directing committee, composed of physicians, hospital administrators, dentists, nurses, public-health officials and others representing the public, should be created to develop policies and principles to be carried out by their agent, who may properly be the Surgeon General of the United States Public Health Service. Lastly, the objective of such legislation should be to provide medical and hospital service, not to provide a cash payment that might be used to obtain medical and hospital care. To achieve this, payments for service should be made direct to the physician or hospital and not to the beneficiary.

If these principles are adhered to, it is safe to present a plan of compulsory health insurance to the people of this country for consideration, for under these conditions freedom of choice and of action is still theirs.

* * *

In conclusion, since I am at heart an individualist, since I think that government best that governs least, and since I think that evolution is the safest way to advance, I am emotionally in favor of voluntary insurance and against compulsory plans. Perhaps these emotions are but the conscious components or results of experience. At the same time, I cannot find any convincing logical arguments against the general principles of compulsory plans, only criticism of specific points and a difference of opinion concerning the desirability of doing things that way. Therefore, from the standpoint of reason and logic I cannot honestly oppose the idea of compulsory plans.

There is so much to be said on both sides that perhaps the answer is that each side may be partly right and that the only way to find the truth is through a fair trial. Why not, then, accept a trial of compulsory health insurance, being careful that it does not replace free enterprise in the shape of voluntary insurance, but that it is operated as a co-operative, supplementary plan, with as few undesirable complications of operation as possible? In other words, if there must be compulsory insurance, let this bill be made as nearly perfect as possible through constructive criticism.

PROLONGED CASES OF GRIEF REACTION TREATED BY ELECTRIC SHOCK

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THE 4 cases that are here reported in somewhat disguised form are technically classified under the heading "reactive depressions." In each of these cases, however, the immediate precipitating factor was the loss by sudden death of someone close and dear to the patient, so that the term "grief reaction"† has been used to designate the mental state of the patient. Electric-shock therapy was used with such excellent results as to merit their publication.

CASE REPORTS

CASE 1. A 48-year-old, married woman had all her life exercised obsessive scrupulosity — that is, a tendency to examine her own acts under over-rigid criteria of right and wrong. With it she was the victim of what may properly be called excessive religiosity, in that she was constantly praying for guidance under circumstances that would not seem to the ordinary religious person to demand such fervency. She was, however, active and well and without any overt mental disturbance until shortly after her only son died under tragic accidental circumstances. The grief reaction was immediate, and she became obsessed with the idea that she was somehow to blame. The train of so-called "reasoning" was circuitous and roundabout, the feeling of guilt was extreme, and gradually the religious reactions became mingled with horrifyingly blasphemous thoughts. In other words, the appeals for help, manifested by prayer, were mingled with derisive and even obscene thoughts. For example, the word "God" became linked with the word "dog," to the horror of her helpless mind. She developed rituals by which she sought to prevent God from taking vengeance on her for her blasphemous reactions. She became sleepless and emaciated, and the psychosis evolved steadily toward an increasing, agitated depression, with obsessive thoughts and compulsive acts. At no time did she lose insight, since she realized that her state of mind was pathologic.

Psychotherapy was attempted by a colleague of high standing, with no results. Drugs were used, mainly sedatives, together with amphetamine sulfate, hormones, vitamins and so forth, but the psychosis increased in severity despite these forms of treatment. Electric-shock treatment was finally decided on, and the patient had to be forced into taking it. Three shocks were given at her home. At the end of the third she begged to have the treatment stopped, stating that she felt much better and that the obsessive and grief-stricken thoughts were "far away." Her appeal was granted, and she steadily continued to improve. Mild sedatives were then sufficient to produce sleep. Amphetamine sulfate was used as a cerebral stimulant in the morning. Seven months after the shocks were discontinued and 9 months following the onset of the mental disturbance, all treatment was stopped.

The patient has continued to remain well. The grief reaction is still present but in a rational form. The obsessive and compulsive reactions have disappeared and she is in normal condition.

CASE 2. A 52-year-old, married woman with a previous history of moderately neurasthenic reactions had always been dependent on her husband for decisions of major importance and entirely wrapped up in her domestic affairs. In June, 1939, her husband, a distinguished engineer, suddenly died of coronary thrombosis. On his death it was discovered that his affairs were in an extremely tangled state. He had been lavish in his help to others, but left no legal papers that indicated the amounts he had given nor the circumstances under which the loans were to be repaid. Thus, the estate consisted of a small amount of insurance and a large amount of dubiously collectible loans and gifts.

Almost immediately the widow plunged into a severe depressive reaction, and was constantly preoccupied with the injustice and ungratefulness of those who had been the objects of her husband's benevolence. Against her own will she had a bitter and disloyal resentment against her husband, partly because he had not taken her into his confidence, but mainly because of the carelessness with which he had kept his accounts. She became sleepless, lost weight, was constantly agitated over the situation, and reiterated her feelings of doubt and helplessness. She was unable to do her housework and could make no plans for the future. There were no delusions. As a matter of fact, whatever she stated about her husband's financial affairs was entirely true, since a survey of his accounts and his checkbooks showed an appalling lack of discretion in the way his money had flowed into the pockets of others.

Psychotherapeutics, a change of scene, sedatives, hormones and finally a prolonged stay in an institution for the treatment of mental disease were equally unavailing, and after nearly four years the condition remained practically unchanged. Doubt, indecision, depression, agitation, impairment of the appetite and inability to sleep or to carry on her life in any co-ordinated, organized way were still present and continuously expressed, to the complete distraction of the patient, and the demoralization of her family.

On September 1, 1942, outpatient electric-shock treatment was begun, almost against the patient's will, since she could in no way decide what to do. Ten treatments were given in rapid succession. Little improvement was noted, and in fact she became almost demented; that is, at the end of the treatments she was, as she expressed it, in a "complete fog." She had almost no memory of recent or remote events, did not even know she was a widow, and had no memory of the faces and names of people with whom she had been on intimate terms throughout her life, although she could recognize her son and a few closely related persons. She did not remember her illness, and the last five years of her life were practically wiped out. During the next 3 weeks gradually her memory returned. She recalled her husband's death, and commenced to recognize that she had been sick and to realize the nature of her abnormal response. Sleep became normal and the appetite was restored in adequate measure; at the end of 6 weeks she recommenced her housework, and in the course of the next month she was reading newspapers, listening to the radio, visiting friends and carrying on her duties as mother and housekeeper about as well as ever before. She was greatly concerned about the money that had, as she put it, "disappeared into the pockets of others," but for the first time she was able to take intelligent and adequate measures for the recovery of the lost funds, and in fact showed considerable intelligence and business judgment in dealing with her affairs.

She has reported from time to time during the year since the shock treatment was discontinued. Although she is still a neurasthenic type of person, complaining from time to time of various pains and aches, — digestive disturbances and the like, — she has maintained a well-organized mental life and is substantially well.

CASE 3. A 48-year-old, married woman carried on an active life in her community, was a musician, and was devoted to her husband and two children. The former was killed in an accident. The patient felt as though she had "no prop left" in her life. Immediately she fell into a state of depression, with self-accusation on the slender ground that she had not prevented her husband from working too hard and thus subjecting himself to unnecessary risks. She became entirely sleepless, lost her appetite completely, complained of burning feelings throughout her body, and manifested an inability to make decisions in any minor

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†To my knowledge, this term was first used by Cobb and Lindemann.[1]

affairs. Finally she made a desperate attempt at suicide and was sent to a state institution, where she remained for a month. She was then discharged, against advice, with a diagnosis of reactive depression. During her stay she had been appalled by her incarceration and the manifestations of insanity by other patients. She sequestered herself in her home for nearly a year following her discharge. She had no desire for any of the pleasures of life — what I[2] have elsewhere called "anhedonia" — and felt that the world was unreal and without any worth and that living was an almost intolerable burden. She could not even summon up interest in the affairs of her sons, who were in the Army. This brooding state remained unaltered for months, and, as the patient phrased it, she had felt "like a ghost" ever since her husband died.

Finally, in January, 1943, outpatient electric-shock treatments were given, five in number on alternate days. The improvement was marked from the third shock on. At the end of the series the patient slept well, had regained her normal appetite, smiled and laughed naturally, and was willing to take up her affairs again. She went back to her music, became absorbed in the care of her house, corresponded affectionately with her sons, and in a short time was reacting entirely normally to the death of her husband and to her status as a widow.

CASE 4. A 28-year-old, married woman was first seen on May 27, 1943, 6 months after the onset of her illness. She was intelligent, keen, active and social minded. Owing to the shortage of maids, she had to stay home each night with her baby, frequently alone. On one occasion she left the infant for an hour to visit a friend, and came home to find that he had suffocated in his crib. The grief reaction was extreme and was immediately associated with bitter self-accusation. Nothing would console her. She finally came to Boston from a distant city and placed herself under the care of a group of distinguished psychiatrists, who utilized psychotherapy but without avail.

On May 28 and 30, I administered electric-shock therapy. When she recovered from the unconsciousness and stupor of the first treatment, she felt peaceful and said that she had not been in so desirable a state of mind for many months. At the end of the second shock she felt entirely well, and as a consequence no further treatments were administered.

She returned to her home and resumed her domestic duties.

DISCUSSION

Each of these cases, all of which significantly occurred in women, was characterized by an intense and prolonged grief reaction following a tragic bereavement. These reactions were to some degree warranted. The prolongation, intensity and transformation of the grief are its pathological features. All the patients fell into a vicious circle of nervous and mental disturbance from which it seemed impossible to rescue them by the ordinary therapeutic measures. Just how the electric-shock method operated in these cases is a theme for fertile speculation, without, however, any basis of established facts. In Case 2 the abnormal mental state had persisted for years, and it was necessary to produce an amentia — that is, to wipe out for a time almost all memory — before the personality could reorganize itself along normal lines. In the other 3 cases a few electric shocks brought about striking and immediate improvement and recovery. It does not therefore seem necessary to erase the memory of the traumatic experience to produce a readjustment to the altered life that bereavement has brought in its train. The value of shock treatment does not appear to have a psychologic foundation. Rather, physiologic alterations of an unknown type take place, and this is the basis of the recovery.

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MEDICAL PROGRESS

CARDIOGENIC SHOCK (Concluded)*

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ORIAS[38] studied the dynamic changes in the ventricles following experimental coronary occlusion and offered a reasonable, and probably important, explanation for the changes observed. In general, three types of responses were encountered. In a few animals the aortic and left-ventricular pressures fell progressively with evidence of cardiac dilatation and failure. In another group of animals there was an immediate fall in aortic and left-ventricular pressure, followed quickly by recovery of the cardiodynamics to the preligation level. A small group of animals showed no fall in pressure, and in them the only evidence of altered dynamics was a decrease in the ejection phase, an alteration that was also observed in the other groups. Orias interpreted these responses as indicating that deletion of a portion of the ventricular muscle immediately resulted in a hypodynamic beat and consequent dilatation of the heart. If the nonischemic muscle was able to respond normally to the increased diastolic size, it compensated for the loss of the ischemic area and the dynamics returned to normal. If the nonischemic muscle could not respond with increased vigor of contraction, in accordance with Starling's law, progressive heart failure and a falling blood pressure appeared. This may well explain why a fall in blood pressure has not been a striking feature of experimental coronary occlusion, for in the majority of such experiments the blood supply and

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the cardiac reserve of the uninfarcted regions were essentially normal. Unfortunately, this does not obtain in many patients with coronary occlusion because of the presence of generalized coronary artery disease or because of the loss of cardiac reserve incident to chronic hypertension. Obviously, the amount of uninfarcted muscle remaining, as well as its condition, is an important factor in the ability of the heart to compensate. Thus the hope of compensation in a heart subject to depletion of a large portion of its muscle mass is slim.

Even if Orias's concept is fundamentally correct,— and no better one has yet been offered, — it is still conceivable that peripheral mechanisms play a contributory role. Two possibilities present themselves. First, primary or neurogenic shock may occur at the onset of the attack, and the resultant fall in blood pressure may so diminish blood flow in the unoccluded coronary arteries as to depress the uninfarcted muscle, thus preventing its normal compensatory response. The result would then be progressive hypodynamic heart action and shock persisting beyond the usual duration of primary shock. That such a train of events may occur cannot be gainsaid, but the force of the contention is somewhat weakened by the fact that in occasional cases the onset of the attack is marked by an increase in blood pressure that may later give way to shock. Such a series of events is unusual because the mere ability of the heart to sustain a blood pressure higher than preinfarction levels attests to its ability to compensate fully. In the rare cases in which it does occur, other collateral factors may possibly play a role.

The second possibility is concerned with whether true peripheral shock may not ultimately appear following a prolonged period of capillary anoxia secondary to cardiogenic shock. It is well known that large doses of epinephrine given over a long period of time may give rise to shock, and that intermittent obstruction to the arterial or venous blood flow to an extremity may do the same. Furthermore, it has recently been shown[29] that sustained hypotension induced by continuous stimulation of the carotid sinus may induce the clinical and pathologic picture of traumatic shock. Against such a contention is the fact that no significant decrease in circulating blood volume or hemoconcentration has been demonstrated in myocardial infarction accompanied by shock, although studies of this kind have not been correlated with the duration of the shock. A more potent argument against such a concept is the fact that the state of shock induced by prolonged anoxia is largely an irreversible process and that recovery is rare. This is not necessarily true in myocardial infarction, for patients may remain in shock for hours or even a day or two, yet ultimately recover.

It appears, therefore, that the bulk of evidence, both direct and theoretical, is overwhelmingly in favor of the concept that shock in myocardial infarction is largely, and probably solely, a manifestation of heart failure.

Some therapeutic considerations can be adduced from the crystallization of present knowledge concerning shock in myocardial infarction. Since the evidence is opposed to any lack of circulating blood volume or loss of effective filling pressure of the left ventricle, measures adopted to combat traumatic shock, such as the use of intravenous fluids or blood, are not only uncalled for but are, of course, contraindicated. Conversely, the reduction of the circulating-blood volume is not contraindicated so long as the evidence indicates an adequate supply of blood to the left side of the heart. The combination of shock and pulmonary edema is not unusual, and in such cases there has been a reluctance to bleed the patient because of the possibility of aggravating the shock. Since pulmonary edema is a manifestation of high pressure in the pulmonary veins, it follows that more than adequate blood is available to the left side of the heart, and no hesitancy need be felt in venesecting such patients. Indeed, pulmonary edema may constitute a more immediate threat to life than does shock, and venesection may occasionally be lifesaving. Stead and Ebert[5] withdrew 650 and 500 cc. of blood, respectively, from two patients with myocardial infarction and shock without any evident harmful effects.

Unless the reasoning has been false, measures designed to combat shock in myocardial infarction should be mainly directed toward supporting the uninfarcted muscle. Some attention has been given to the subject of treatment of this form of shock, but it has not received the consideration it deserves, probably owing to the contention of some clinicians that a low blood pressure relieves the work of the heart and therefore should not be vigorously combated. It should not be inferred that moderate reduction of blood pressure should be attacked vigorously, but it is hardly conceivable that a state of profound shock is helpful to the bodily economy.

The intravenous injection of 50 per cent glucose solution has been recommended by some authors for the treatment of shock in myocardial infarction, and success with this method has been reported. I have never seen recovery from shock attributable to this procedure, and many clinicians have had a similar experience. Furthermore, there is no evidence that the blood volume needs to be supplemented, nor is there evidence that the heart lacks fuel to burn — the two main attributes of hypertonic glucose solution.

Oxygen therapy has been found useful in the treatment of shock in myocardial infarction. The rationale of its use is not to increase the oxygen supply to the infarcted tissue, for it is probable that no available measure can immediately increase the blood or oxygen supply to this area.[30] Its usefulness

lies in increasing the oxygen available to the uninfarcted muscle, hence enhancing its ability to compensate. Even the small amounts of additional oxygen that can be taken up by normally saturated blood may serve a useful purpose. It is probable, however, that at times, owing to pulmonary congestion, the blood is not normally saturated. Under such circumstances, oxygen administration fulfills an important service.

The experimental work of Manning, McEachern and Hall[31] and LeRoy and Snider[32] indicates that sudden occlusion of one coronary branch leads to reflex constriction of other coronary arteries. If such a phenomenon occurs in human beings, it must constitute a significant barrier to an adequate response of the uninfarcted muscle. The drugs that have been recommended for overcoming this reflex constriction are atropine, aminophylline and papaverine. In addition, aminophylline is a myocardial stimulant and may be temporarily useful for this reason alone.[33, 34] Also, papaverine has been found to decrease ventricular irritability,[35, 36] and its use may reduce the danger of ventricular ectopic rhythm. None of these drugs have been adequately evaluated for their effect on shock in myocardial infarction, and their inclusion here is based on theoretical grounds alone.

If one accepts shock in myocardial infarction as a manifestation of heart failure, the use of digitalis and other cardiac glycosides must come in for very serious consideration. In general, the use of digitalis has been avoided during the acute stages of the disease, for the following reasons. First, it decreases cardiac output in patients without heart failure, and it has been thought that this effect may aggravate the shock. Since the evidence favors the presence of congestive heart failure in myocardial infarction, even in patients who show predominant signs of shock, it is apparent that this objection is insignificant and may be disregarded. Second, the use of digitalis has been objected to on the ground that stimulation of the heart may increase the danger of cardiac rupture. Undoubtedly this objection has been overrated, particularly so in the present connection since the appearance of shock is usually limited to the first day or two, a time when ventricular rupture is unlikely. Moreover, digitalis has commonly been used to combat congestive heart failure in the later stages of cardiac infarction, when rupture is more likely to occur, without evidence of undue prevalence of this complication. Finally, the objection has been raised that digitalis increases ventricular irritability and increases the likelihood of fatal ventricular fibrillation. Although this objection is possibly valid, it should be recalled that such ventricular irritability is usually to be attributed to excessive amounts of digitalis. It has not been demonstrated that cardiac infarction sensitizes the heart to therapeutic amounts of the drug.

It has been shown that in the experimental animal digitalis does not significantly alter the fibrillation threshold of the ventricles.[37] It has also been demonstrated that the spontaneous ventricular fibrillation that occurs with toxic amounts of digitalis differs in several particulars from that which occurs with coronary occlusion.[37, 38] Although myocardial ischemia lowers the fibrillation threshold, it has not been shown that this increases the tendency of digitalis to produce fibrillation. Indeed, there is considerable evidence that this is not true.

In 1925, Gold[39] found that the lethal dose of ouabain for cats subjected to coronary artery ligation did not differ from that for normal animals. This study extended over a period of twenty-four hours following ligation. More recently, these findings were confirmed by Bellet, Johnston and Schecter,[40] but the latter authors extended the period of observation and found that four days following ligation the tolerance to digitalis diminished by 23 per cent of normal. Still later, Travell, Gold and Modell[41] reported that the tolerance of cats to digitalis three weeks after ligation of the coronary arteries was diminished by 25 per cent. Since shock in cardiac infarction is usually an early manifestation, it appears from these experiments that no great fear need be felt in the use of digitalis. Furthermore, as emphasized by Travell, Gold and Modell, all these studies have been concerned with lethal amounts of the drug, and no information concerning therapeutic amounts of the drug has been forthcoming. They conclude that the results lend no support to the belief that the use of digitalis is attended by any special hazards in these cases [coronary occlusion].

Certainly digitalis has been used in many patients with acute myocardial infarction accompanied by congestive heart failure. The number of sudden deaths in such patients is probably no larger than might be expected in a similar group not receiving digitalis. Stead and Ebert[5] gave intravenous strophanthin to 2 patients in shock with myocardial infarction without evidence of benefit or harm. The number is, of course, too small to evaluate the possible hazards or benefits of this drug, but it indicates that digitalis bodies can be given under such circumstances without invariably producing disastrous results.

Strophanthin or ouabain is probably the drug of choice, since its action is rapid, it does not accumulate so readily as digitalis, and it is said to have a greater direct action on the myocardium than does digitalis.[42]

It should not be supposed that digitalis bodies are being enthusiastically recommended for the treatment of shock in myocardial infarction. There is no assurance that they do good nor that they are entirely free of danger. The suggestion is simply made that, on theoretical grounds, such substances

may be expected to turn the scales in some cases, and that objections to their use have probably been greatly overemphasized.

The subject of therapy should not be left without some discussion of the use of pressor drugs. A few physicians have used epinephrine unhesitatingly in shock associated with myocardial infarction, some have been goaded into its use by the necessity of desperate circumstances, and some have avoided it completely. Several objections have been raised to its use. It has been thought to be contraindicated in all forms of shock because arteriolar constriction is already present, and if epinephrine does succeed in producing further constriction it will only serve to increase capillary anoxia and thus aggravate the shock. This may apply to traumatic shock, but it is probably insignificant in the type of shock under discussion.

Pressor drugs have also been objected to on the ground that hypotension relieves the work of the heart and is a compensatory mechanism, and hence should not be combated. This is not an especially appealing argument. Inasmuch as the ability of the uninfarcted muscle to compensate is determined, in large part, by its blood supply, which, in turn, is determined largely by the aortic blood pressure, it seems desirable to overcome a profound fall in blood pressure if possible. The opposing argument could only be considered valid if it could be shown that the decrease in cardiac work associated with shock is disproportionately greater than the decrease in coronary blood flow. This seems extremely unlikely.

Epinephrine has also been objected to on the ground that it tends to produce ventricular irritability. This belief has some support in clinical and experimental observations, but recent work indicates that the ventricles of experimental animals are more resistant to the production of ventricular fibrillation after the administration of epinephrine than they are in the untreated state.[28] It should also be recalled that in patients with Adams–Stokes's attacks complicating acute myocardial infarction, epinephrine has been used repeatedly and in large amounts with nothing but benefit resulting in the majority of cases.

Meek[29] has recently reviewed the evidence relative to the production of ventricular tachycardia by epinephrine, especially in regard to its effect during cyclopropane, chloroform and ether anesthesia. Several interesting observations pertinent to the present discussion have been made. Under the conditions of the reported experiments, it was demonstrated that, especially with cyclopropane, epinephrine produced ventricular tachycardia regularly, whereas similar doses in the unanesthetized dog produced it but rarely. It was also demonstrated that sensitization of the heart itself by cyclopropane is of much less importance than nervous impulses reaching the heart by way of the sympathetic pathways. It is possible, therefore, that the combined effect of cyclopropane and epinephrine is simply equivalent to the effect of a large dose of epinephrine alone. In any event, the analogy of sensitization of the heart by anesthetic agents and the possible sensitization by coronary occlusion may not be very close, and is certainly not established. Meek also noted that other amines were as effective as adrenalin in producing ventricular tachycardia under cyclopropane anesthesia, and that only amines with a catechol ring had this ability. To be effective, the various side chains in the structural formula must be attached to the 3-4-dihydroxy ring. Other drugs capable of producing the same degree of blood pressure increase but without the characteristic structural formula did not induce ventricular tachycardia. Such drugs were Ephedrine, Amphetamine (Benzedrine), Paredrine, Synephrine and Neo-Synephrine. It seems, therefore, that if pressor substances are to be used in myocardial infarction, one of the latter group is preferable to epinephrine.

A more important objection to epinephrine is its tendency to increase both the general and the cardiac metabolism. This effect is doubtlessly out of proportion to the increase in blood flow incident to its use, and the administration of epinephrine is therefore an uneconomical and probably unsafe procedure.[44] Ephedrine is an equally good, if not a better, pressor drug, and its tendency to stimulate metabolism is somewhat less than that of epinephrine.[33] Hence it is superior to epinephrine on at least two counts and perhaps deserves a place in the management of shock with myocardial infarction. Some of the newer sympathomimetic amines may prove to be superior, for one reason or another, to ephedrine.

* * *

It is fully realized that certain of the ideas expressed in this section devoted to myocardial infarction will be new to many readers and perhaps unacceptable to some. The ideas relating to treatment, especially, are not expressed as established facts, but an attempt has been made to assemble recent developments and to indicate the need for critical re-examination of older beliefs. It should again be emphasized that many questions are still unanswered, and that until more information is available on controversial points, trial of the unorthodox procedures should properly be limited to gravely ill patients whose prognosis has heretofore been almost universally bad. It should also be emphasized that, irrespective of the soundness of these therapeutic suggestions, many such cases are hopeless from the beginning because of the large size of the cardiac infarct and the paucity of remaining uninfarcted muscle.

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Vol. 19

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Weekly Clinicopathological Exercises
FOUNDED BY RICHARD C. CABOT
TRACY B. MALLORY, M.D., *Editor**
BENJAMIN CASTLEMAN, M.D., *Acting Editor*
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CASE 30091

PRESENTATION OF CASE

A sixty-five-year-old man was admitted to the hospital with a compound fracture of the right leg incurred a few hours previously after a fall down a flight of stairs.

For about ten years prior to admission the patient had been treated in the Out Patient Department for pernicious anemia with parenteral liver extract. In spite of this therapy the hemoglobin and red-cell count had been falling over a period of a year. He had occasionally noted paresthesia in his feet and muscle cramp, with some difficulty in walking. He had dyspnea on exertion. His diet was poor, and he had been drinking 6 to 10 glasses of beer daily for many years. For three years the liver had been palpable.

Physical examination revealed a well-developed, well-nourished man who appeared drowsy. The tongue was red and beefy. A few rhonchi were audible at the right base. The heart was negative. The liver edge was palpable 3 cm. below the right costal margin. The left ankle jerk was absent, but the vibration and position senses seemed intact. The right leg revealed a compound comminuted fracture of the right tibia and fibula.

The temperature was 99.4°F., the pulse 132, and the respirations 16. The blood pressure was 160 systolic, 95 diastolic.

Examination of the blood showed a red-cell count of 3,920,000, with 65 per cent hemoglobin. The white-cell count was 8800, with 80 per cent neutrophils. There were no red-cell abnormalities. A urine examination was negative. The van den Bergh, blood nonprotein nitrogen, and blood protein determinations were normal. The albumin-globulin ratio was 3.0. The prothrombin time was 35 seconds (normal, 22 seconds). A blood Hinton test was negative.

The patient was immediately taken to the operating room, where a débridement, irrigation, open reduction and application of a Lane plate to the tibia were performed. A cast was applied and the patient was transfused and given sulfadiazine, which was discontinued after four days because of a fall in the white count to 4400. The temperature rose to 101 or 102°F. following the operation. An x-ray film of the chest during this period revealed prominence of the lung markings, especially at the right base. On the third postoperative day the temperature became normal, and remained so for two weeks, during which time the patient was asymptomatic. On the eighteenth hospital day, following a transfusion, the patient had a chill with a rise in temperature to 101°F., which continued for several days. The patient felt tired, and his appetite was poor. There was questionable tenderness over the left kidney, but the urine was negative. The lungs were clear. Two days later the cast was removed. The wound was well healed except for a small area over the fracture site, from which serosanguineous fluid exuded. This area soon sloughed, leaving a small portion of the plate exposed, but there was no evidence of extending infection.

Following a few days of normal temperature, it again rose, going to 100 or 101°F. daily. The patient remained lethargic. His appetite was poor, and he complained of cramplike abdominal pain and malaise. There was soreness in the epigastrium to the right of the midline. He also developed tenderness of the right calf, associated with edema of the foot, and a bilateral femoral-vein ligation was subsequently performed, without apparent change in his condition.

Although microscopical examination of the urine was essentially negative, urine culture revealed a moderate number of colonies of *Staphylococcus albus*. Because of this, together with the persistently elevated temperature, the patient was given small doses of sulfathiazole for a period of about two weeks, during which time there were only occasional rises in temperature to 100°F. The white-cell count ranged from 4000 to 7000, with 49 to 76 per cent neutrophils. Because of inadequate caloric intake and increasing evidences of dehydration and malnutrition, large amounts of vitamins as well as parenteral fluid and glucose were given. Administration of vitamin K (Hykinone) parenterally did not bring down the prothrombin time, which eventually reached 52 seconds (normal, 22 seconds). The blood protein was 8.9 gm. per 100 cc., with an albumin-globulin ratio of 0.5. The van den Bergh test remained normal. A cephalin flocculation test was +, but later ++. A bromsulfalein test revealed 35 per cent retention of the dye. Blood cultures were negative.

The patient's condition gradually deteriorated. The temperature spiked to 103 and 104°F. daily, and he had several chills. Examination revealed an emaciated man with a Parkinsonian rigidity and masklike facies. Crackling rales were audible at both bases, being more marked on the left. The heart was slightly enlarged, with soft systolic murmurs at the base and apex and an early diastolic apical gallop rhythm. The blood pressure was 108 systolic, 68 diastolic. The liver and the tip of the

*On leave of absence.

spleen were palpable. Some brawny ankle edema was present. A portable roentgenogram of the chest revealed poorly outlined mottled areas of increased density scattered throughout both lung fields.

On the seventy-second hospital day the patient developed considerable respiratory distress and became totally disoriented. He was placed in an oxygen tent but expired two days later.

Differential Diagnosis

Dr. Jacob Lerman: There are several interesting points that we should review and comment on before discussing the diagnosis. This man apparently had adequate parenteral therapy for pernicious anemia and then began to lose ground. Usually one of several factors explains the failure to respond or the tendency to relapse. Either the therapy is inadequate or subminimal, so that gradually the patient slips into a relapse, or infection or some toxic agent supervenes, or another degenerative disease develops. In this particular patient several factors existed. His diet was poor, he had been taking alcohol, and he had signs suggesting liver damage. All three factors might play a role in the failure to maintain a good response or in a tendency to relapse. The tendency to relapse is confirmed by the fact that he had a red, beefy tongue and weakness. Although there is a suggestion that he might have had combined-system disease, the presence of vibration and position senses is strongly against that possibility. The blood picture is that of mild anemia — he had not maintained his normal red count and hemoglobin. The increased prothrombin time is further evidence of liver damage. It is true that such an increase can be due to inadequate intake of vitamin K, but we learn later that vitamin K administration did not help.

The patient was operated on, and given sulfadiazine until leukopenia developed. On the eighteenth postoperative day there was a transfusion reaction. This raises the question whether the reaction could have been due to antibodies against the Rh factor. It is possible but one hardly expects a reaction to the Rh factor on the second transfusion, since it usually takes several transfusions to produce such a reaction.

There is a note that the patient was beginning to have renal pain. We know that in pernicious anemia, particularly in those cases associated with combined-system disease, kidney infection is of common occurrence. So our attention is drawn to the possibility of pyelitis, pyelonephritis or abscess involving the kidney or perirenal tissues. Further evidence of urinary infection is offered by the positive urine culture. The service apparently gave sulfonamides in an attempt to reduce the infection; it was partly successful but did not result in a cure.

The fever, lethargy, abdominal cramps and fullness in the epigastrium point toward the gall bladder as the locus of infection. Again, gall-bladder disease is common in pernicious anemia. In addition one must pay attention to two other places as loci of infection — namely, the fracture site and the thrombophlebitis in the right leg. Inasmuch as femoral-vein ligation did not do much good, it seems that the infection was not localized in the veins of the leg.

There is additional evidence of liver disease — namely, failure to respond to vitamin K, a high serum protein (so common in the early stages of liver disease), reversal of the albumin-globulin ratio, a positive cephalin flocculation test and, finally, retention of bromsulfalein. Later on there is evidence that he was developing cardiac failure — namely, rales at the bases, an enlarging heart, diastolic gallop rhythm, a drop in blood pressure and edema of the ankles. Certainly he must have had some underlying arteriosclerotic heart disease that was made worse by the prolonged fever.

What about the diagnosis? I think we have to consider several diagnoses in this case. Since he had treatment I doubt that we can prove the presence of pernicious anemia, and I believe that the pathologist will also be unable to make this diagnosis. The patient undoubtedly had cirrhosis in the early stages, which was made worse by infection or by drugs. He had sulfonamides twice, and in the presence of liver disease they can cause additional damage. It is possible that he never had pernicious anemia, because in cirrhosis there frequently exists a hyperchromic anemia that can be mistaken for pernicious anemia. Since this anemia also responds to liver, there is no way of distinguishing one from the other after treatment. Undoubtedly he had arteriosclerotic heart disease with congestive failure.

The important problem is to determine the cause of the prolonged fever. A patient with cirrhosis may have superimposed hepatitis, which can give a prolonged spiking fever. If this were the case, the patient would have had jaundice. Since there is no mention of jaundice we can rule out hepatitis superimposed on cirrhosis.

Malignant disease in various locations might produce prolonged fever. Could this fracture have been a pathologic fracture? I can find no clue in the record that it was. Hepatoma, which sometimes supervenes in cirrhosis, can be the cause of fever. Carcinoma of the stomach should be mentioned since it is frequently associated with pernicious anemia. The patient certainly had not had carcinoma of the stomach for ten years. He could have had polyps of the stomach that had undergone malignant degeneration. There is, however, no evidence for this diagnosis; I merely mention it. Lymphoma should always be mentioned, particularly the type located in inaccessible regions, such as the retroperitoneal lymph nodes. Multiple myeloma is suggested by the high serum protein, but that is the only evidence we find for such a diagnosis.

Could there have been any sepsis coming from the wound itself? Although the statement is made that "there was no evidence of extending infection," there was enough to produce thrombophlebitis. Other types of infection should be considered, such as generalized or miliary tuberculosis. I merely mention them, but find no evidence for them. The same is true for subacute or chronic endocarditis, and for certain types of noninfectious diseases, such as periarteritis nodosa and lupus erythematosus disseminata, any one of which may cause prolonged fever.

I should like to see the films of the lungs.

DR. LAURENCE L. ROBBINS: These films demonstrate the fracture, but I do not believe that we need to spend time on them. I do not see anything that suggests a pathologic fracture.

These two films of the chest were taken one month apart while the patient was in the hospital. This portable film was taken during the last acute episode. About the only thing I can see of significance is the diffuse increase in the markings throughout the lungs, which could have been on the basis of increase in size of the vascular or lymphatic channels. The ribs do not suggest myeloma. Terminally there are areas of density. I am not sure of their significance because the film was taken with a portable machine and there was motion; however, one would have to consider multiple small infarcts. From the abdominal film one can say that the spleen was certainly enlarged. There is an indefinite shadow of calcification overlying the left kidney, which is possibly outside the kidney. The bones of the lumbar spine and pelvis show no degenerative changes or evidence of multiple myeloma.

DR. LERMAN: There are two places where the evidence points to the presence of infection. One is the kidney pelvis, the substance of the kidney or the tissues around the kidney. Such an infection, with resulting thrombophlebitis, could have accounted for pulmonary emboli. The other locus of infection is the gall bladder. There were, however, no localizing signs in the region of the gall bladder. Another possibility is repeated emboli from the thrombosed femoral vein. Although this is unlikely because of the bilateral femoral-vein ligation, there is a possibility that the thrombus extended beyond the point of ligature, continued to throw off emboli and thus produced pulmonary infarcts. In any case the x-ray findings may be explained either by repeated pulmonary infarcts or by terminal bronchopneumonia. They certainly do not suggest metastases.

I shall have to conclude that this patient had an infection either in the kidney or in the gall bladder, or in both, but I do not know what type of infection.

DR. J. H. MEANS: I thought the chills were impressive. I wondered if he could have had a staphylococcal pyemia, with abscesses in the kidney, liver and elsewhere. The negative blood cultures do not rule out the diagnosis.

DR. FLETCHER H. COLBY: Where was the primary focus?

DR. MEANS: I do not know.

DR. JAMES B. AYER: You did not say anything about the Parkinsonian feature. Does it fit in?

DR. LERMAN: No, except for the fact that the patient was very sick.

CLINICAL DIAGNOSES

Pyelonephritis.
Hepatitis.
Bronchopneumonia.

DR. LERMAN'S DIAGNOSES

Renal infection (? type)?
Cholecystitis?
Portal cirrhosis.
Arteriosclerotic heart disease.
Pulmonary infarction.

ANATOMICAL DIAGNOSES

Pulmonary tuberculosis.
Miliary tuberculosis of liver, spleen, kidney, and bone marrow.
Portal cirrhosis of liver.
Mycotic aneurysm of sinus of Valsalva (tuberculous).

PATHOLOGICAL DISCUSSION

DR. BENJAMIN CASTLEMAN: This man was a puzzle on the surgical ward, and the surgeons called in the medical men frequently to see if they could find out the cause of the prolonged fever. The surgeons believed that the cause of the fever had nothing to do with the fracture.

At autopsy, we found both lungs expanded and almost completely solid. On section, numerous small cavities that looked like broken-down abscesses were seen. It was thought that the disease was a diffuse bronchopneumonia with secondary abscess formation. Another interesting finding was in the aorta. Just above the aortic valve there was a tear in the intima with the formation of an aneurysm into the sinus of Valsalva. The aneurysm measured 3 cm. in diameter and had not ruptured.

Microscopic examination of the lung showed that this man had an acute diffuse tuberculous process throughout the lungs — a tuberculous pneumonia. He also had miliary tuberculosis of the kidneys, liver and spleen. The aneurysm in the aorta proved to be a mycotic aneurysm due to tuberculosis, a very unusual occurrence. In addition to miliary tuberculosis, the liver showed evidence of an old portal cirrhosis. We were unable to find any evidence of pernicious anemia as Dr. Lerman predicted; there were large amounts of hemosiderin in the marrow spaces, as well as miliary tubercles, but no evidence of red-cell hyperplasia.

Dr. Colby: I was not here for the first part of this discussion, but it is interesting that, although the history states that the urine was negative, the patient had renal tuberculosis. In my experience in the past ten years I have never seen a case of renal tuberculosis that did not show albumin in the urine.

Dr. Castleman: This was miliary tuberculosis, which I judge developed in the kidneys during the last two months of his stay. It was not a primary renal tuberculosis.

Dr. Lerman: Was there any evidence of recent hepatic disease?

Dr. Castleman: No, with the exception of the tuberculosis.

CASE 30092

Presentation of Case

A fifty-nine-year-old unemployed painter entered the hospital because of anorexia.

The patient had never been a "big eater." About five months before entry, however, he gradually lost his appetite so that he eventually ate "almost nothing." For a few weeks before entry his daily diet had consisted entirely of an éclair and one or two glasses of milk. Two months before admission he began to have a sensation of generalized abdominal pressure, which occurred two or three times daily, lasted one hour and was most severe in the morning. Two weeks prior to entry he began to have a strange, sharp precordial pain every two hours; this lasted five or ten minutes, and was relieved by eating and eructation and to a lesser degree by alkalies. He became progressively weaker, and for the week preceding entry had been so shaky that he fell when walking. He had been constipated for months, having had only two bowel movements weekly. The last bowel movement was one week before admission, at which time he thought that he recognized food eaten in the morning. He had had no abdominal pain, nausea, vomiting, hematemesis, melena, fever, chills or urinary symptoms. He had lost 40 pounds of weight since the onset of his illness.

Physical examination showed a pale, emaciated man who looked older than his stated age. Examination of the heart and lungs was negative. The abdomen was scaphoid. There were no masses, tenderness or spasm. The liver and spleen were not palpable. The lower poles of the kidneys were palpable. The cecum and sigmoid were felt and appeared normal. Rectal examination was negative.

The blood pressure was 135 systolic, 56 diastolic. The temperature, pulse and respirations were normal.

Examination of the blood showed a white-cell count of 19,100, with 76 per cent neutrophils. The hemoglobin was 8 gm. The urine was negative. The stools were guaiac negative. The blood protein was 4.8 gm. per 100 cc. A blood Hinton test was negative.

A gastrointestinal series showed a normal esophagus. The fundus of the stomach was not well visualized. A small amount of barium appeared to pass backward into the fundus, but the upper portion seemed to be filled by a rather smoothly demarcated mass. Within the mass there was a peculiar round air shadow, but that portion could not be filled with barium. A localized bulge of the diaphragm was seen in the region of the mass. Study of this area, however, was difficult because of the patient's emphysema. The remainder of the stomach and the duodenal cap were not remarkable. In about two and a half hours barium was seen in the transverse colon.

A gastroscopy on the twelfth hospital day showed the mucosa of the body of the stomach to be somewhat pale but not definitely atrophic. Close to the cardiac orifice, and extending into it, was a rather smooth, rounded mass measuring 5 cm. in diameter; there was no evidence of ulceration.

The patient was given two transfusions of 500 cc. of blood each, and an operation was performed on the thirteenth hospital day.

Differential Diagnosis

Dr. Edward Hamlin, Jr.: I think it is fair to say that the abnormal laboratory findings were due to cachexia. The patient had eaten nothing but éclairs for a long time, and there is no reason why he should not be anemic, and have a low blood protein as well. On the other hand, he may have had loss of blood. Since Dr. Benedict is here, I wonder if he could enlarge on the gastroscopic examination.

Dr. Edward B. Benedict: I said that no ulceration was "visible." I could not see around the tumor. Furthermore, I said that there was a blood clot hanging from the lower margin of the tumor.

Dr. Hamlin: That is of considerable interest. I tried to imagine a gastric tumor without ulceration and with air in the center, and that led me to wonder whether a lipoma could show increased radiance that might be mistaken for air. Dr. Benedict's visualization of a hanging blood clot makes that extremely unlikely.

Dr. Laurence L. Robbins: This spot film perhaps shows the lesion to the best advantage. Normally, we should expect to see the fundus of the stomach extending backward in this region. Here we find a relatively smooth mass that apparently fills the greater portion of the fundus. Incidentally, this is a place that is particularly difficult for a gastroscopist to see. The air shadow is present on several films, but at no time were we able to get any barium into it. The statement is made in the record that the examination of the area was difficult because of emphysema. That is simply because this area is beyond the reach of palpation, and to determine the changes we like to make use of the diaphragm. This patient had so much emphysema that the diaphragm

did not move well, and the examination was difficult, but I think that there was a tumor.

DR. HAMLIN: From an academic point of view is there increased radiance in lipoma of the stomach?

DR. ROBBINS: I have never seen one, but I think there should be if lipomatous tissue is surrounded by barium or by tissue with the density of water, such as mucous membrane, muscle and so forth.

DR. HAMLIN: I must try to determine what type of gastric tumor this was. It obviously does not seem to have been a typical carcinoma of the stomach because of its location and also because of its appearance by x-ray and by gastroscopy. Was it malignant or was it one of the rare benign forms of tumor? Statistically, it is more likely to have been malignant. Furthermore, the fairly short history and the age of the patient suggest a malignant tumor.

I am not going to go through the various types of tumor that can be found in the stomach. Leiomyoma, fibromyoma and sarcoma are the most likely ones in that portion of the stomach under these circumstances. The fact that an air shadow was present indicates in all probability a small fistulous tract from the center of the tumor to the interior of the stomach and, as Dr. Allen has pointed out on occasions, that is almost pathognomonic of the leiomyosarcomatous type of lesion. I shall leave it at that.

DR. RICHARD H. SWEET: We considered lymphoma and leiomyosarcoma as possible diagnoses in this case, although we did not give much weight to either diagnosis because of the absence of any real evidence of bleeding except microscopically. In my experience many of the patients with leiomyosarcoma have had massive hemorrhage.

A transthoracic incision was made. As soon as the diaphragm was visualized it was obvious that we were dealing with a carcinoma that had invaded a large portion of the central tendon of the diaphragm. A free portion of the diaphragm near the costal margin was incised and the abdomen opened. A massive tumor arising in the stomach and invading the spleen and the tail of the pancreas was found. At first it seemed almost impossible to remove this growth because of its invasion of diaphragm, spleen and pancreas, but it was finally decided that an attempt was worth while. As a result we completed the operation successfully, after having resected a large portion of the stomach with a piece of the diaphragm attached, the spleen, the left adrenal gland and about half the pancreas. Restoration of continuity was carried out by performing an esophagogastric anastomosis. The patient made a good recovery and has since left the hospital.

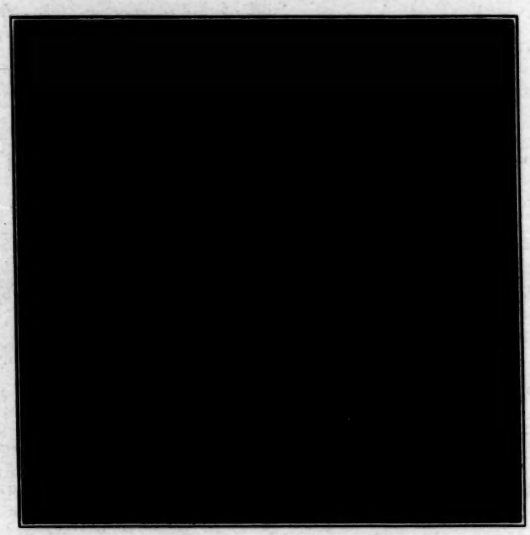

FIGURE 1. *Cross Section of the Tumor Mass, Showing Extension from the Stomach into the Spleen.*

CLINICAL DIAGNOSIS

Carcinoma of stomach.

DR. HAMLIN'S DIAGNOSIS

Leiomyosarcoma of stomach.

Anatomical Diagnosis

Adenocarcinoma of stomach, with extension into spleen, pancreas and diaphragm.

Pathological Discussion

Dr. Ronald C. Sniffen: As Dr. Sweet has indicated, the description of this specimen is like a summary of the abdominal cavity in *Gray's Anatomy*. A 2-cm. segment of the esophagus was resected, a portion of the stomach and pancreas, the spleen, the left adrenal gland and a section of diaphragm.

The tumor lay high on the left wall of the stomach and was approximately 4 cm. in diameter and rather nodular; in its center there was a wide crater. This crater penetrated the tumor and led directly into the spleen (Fig. 1), which was adherent to the stomach and almost entirely replaced by tumor. In addition the neoplasm had invaded the pancreas, had surrounded the adrenal gland and had implanted itself on the diaphragm.

Microscopically it was a Grade II adenocarcinoma that had arisen from the gastric mucosa.

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COMPULSORY HEALTH INSURANCE

Two articles appearing elsewhere in this issue of the *Journal* deserve careful and thoughtful reading. In one, Mr. I. S. Falk, director of the Bureau of Research and Statistics, Social Security Board, clearly and simply outlines the principles and philosophies that have been responsible for the Wagner–Murray–Dingell Bill. In the other, Dr. Nathaniel W. Faxon, director of the Massachusetts General Hospital, discusses the pros and cons of compulsory health insurance, and makes an appeal for the utilization of existing agencies for the provision of medical care if compulsory insurance is judged to be necessary.

In spite of the remarkable advances of American medicine, there is no doubt that many people of this country either lack facilities for medical care or receive poor medical care; on the other hand, the number is undoubtedly lower than that claimed by the groups that favor a radical change. The fact that, by and large, the mortality rates for specific diseases are as low in the United States as in any other country of the world is no guarantee that medical and hospital practice is perfect. As previously commented on editorially,[1] the health of the Nation is largely influenced by many nonmedical factors — decent wages, a high standard of living, unsurpassed educational facilities, excellent means of transportation and well-endowed and well-administered charitable organizations. To disregard these influences and to argue that medical and hospital practice is beyond criticism is plain stupidity, and one of the reasons why the attitude of many physicians and professional organizations toward the problems of medical care has received little sympathy from certain laymen and physicians who are more keenly aware of the actual state of affairs. On the other hand, there seems to be little excuse for radical experimentation, with the adoption of an entirely different scheme of medical and hospital practice. As aptly stated in *Hospital Progress*,[2] "Has the present system proved so inefficient, so hopelessly useless, so economically unsound, so professionally barren, as to make it necessary, if we must remedy the alleged shortcomings of our present system, to appeal to an incredibly different pattern of medical care?"

Every effort should be made to improve the health of the Nation, but the present system of medical and hospital care need not be discarded to accomplish this ideal. The process should be one of evolution, not one of dissolution. Organizations offering voluntary insurance have traveled far in the last five or ten years, and those under the control of physicians and hospital administrators assure a quality of service that can never be duplicated by a scheme in which bureaucracy and politics play essential roles. Certainly, the principles embodied in the letter sent to all congressmen from New England by their respective medical societies[3] deserve careful consideration. If compulsory insurance ever becomes necessary, it should be at the state level, since conditions in different parts of the country are so vari-

able. Existing agencies for medical and hospital care should be utilized, and if necessary, the states could be assisted by federal grants-in-aid.

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MR. FARLEY SPEAKS OUT

A RELEASE in January of this year by Mr. J. W. Farley, executive director of the Massachusetts Committee on Public Safety, to the various officials of his organization deserves comment. Mr. Farley expressed himself on the state of the war at the very beginning of 1944, the year of decision; and the present situation, two months later, shows that his remarks were pertinent.

We have been suffering all over this country from a wave of optimism and from a relaxation in the various phases of our war work as a result of it. This complacent attitude has been caused by a feeling that the war has been practically won and that Germany at least will soon collapse. This feeling was so widespread in the fall of 1943 that specific limits were set to the time that our enemies could hold out. Relatively conservative estimates placed the end of hostilities at Christmas; positive assertions were made in November that it would all be over in a couple of weeks!

Our successes, all of which have been played up by the commentators and featured by the newspapers, have contributed to our optimism while our failures and our losses have been consistently minimized. The first steps that we have taken on the road to victory have been glorified, as they have deserved to be, but the length of the difficult road lying ahead has seldom received the recognition that is necessary if we are to keep a true perspective of current events. We have been told of our own accomplishments in production and in military preparation, but we have not been made to realize the effectiveness of our enemies' forces or their own tremendous output of the goods with which war is waged. We have seen too much of one side of the picture, — our side, — and this and our unrealistic tendency to wishful thinking have given us a dangerous overconfidence. The bloody battles by which we have inched our way onward in the Apennines, the cost of our victory at Tarawa and the present precarious situation of our beachhead at Anzio should bring this distant war with its aura of impending victory considerably nearer to us and make it more grimly realistic.

Germany is in an excellent position to carry on a long defensive war. With unconditional surrender as the alternative, her military rulers have little incentive to do otherwise than to fight. Her people, like the Japanese, entertain no feelings of guilt regarding this conflict. They consider themselves to be a superior race, surrounded and frustrated by rapacious neighbors against whom they have been forced to take up arms to save their national existence. As they are beaten back toward their inner defenses their bitterness and their hatred and their patriotism will grow. They will be then no longer conquerors, but a united people with their backs to the wall, fighting for their homeland.

Unless we relax our efforts, victory will come, but not soon. Mr. Farley rightly cautions the members of his organization that it is their duty to combat false optimism and keep the country prepared for the trials that lie ahead.

MEDICAL EPONYM

TAKATA-ARA REACTION

Drs. Maki Takata (b. 1892), deputy director of the Koishikawa Hospital, Tokyo, and Kiyoshi Ara, reported "Über eine neue kolloidchemische Liquorreaktion und ihre praktischen Ergebnisse [Concerning a New Colloidal Chemical Reaction of the Spinal Fluid, and Its Practical Significance]" in the *Transactions of the Sixth Congress of the Far Eastern Association of Tropical Medicine* (1:667-671, 1925). A portion of the translation follows:

> In order to test the cerebrospinal fluid, the procedure is as follows: To 1 cc. of spinal fluid is added 1 drop of a 10 per cent solution of sodium carbonate, then 0.3 cc. of a freshly prepared mixture of equal volumes of 0.5 per cent mercuric chloride and 0.02 per cent fuchsin is added and thoroughly mixed by shaking. The order cannot be reversed since if the sodium carbonate solution is added to the mercuric chloride-fuchsin mixture, there is always a certain amount of precipitation of mercuric oxide. It is best to make readings after a few minutes, again after half an hour, and again after twenty-four hours. Normal spinal fluid becomes blue violet and shows no precipitate. If the test is performed on pathologic fluid, the two following quite opposite types of reaction may be observed:
>
> 1. A blue-violet flocculant precipitate, above which the fluid is water clear (metaluetic type).
> 2. A pink color without flocculation (meningitic type).

R. W. B.

OBITUARY

ROY DENNIS HALLORAN
1894–1943

The death of Roy Dennis Halloran has taken from the neuropsychiatric section of the medical profession of this state and of the country an eminently capable man in the most productive period of his life. His death is a great loss for this state in particular, for he had contributed much in broadening the ideas on the hospital care and treatment of those who are mentally ill. No doubt were he to have lived and to have resumed his professional activities in Massachusetts, a great deal more could have been expected from him.

Dr. Halloran was born in Cambridge, Massachusetts, on August 4, 1894. He received his secondary education in the Boys' High School, Brooklyn, New York, and his A.B. degree *cum laude* from Dartmouth College in 1917. He received his M.D. degree from the College of Physicians and Surgeons, Columbia University, in 1920. After two years' internship in the Newark City Hospital he entered the field of psychiatry and became assistant physician and then senior physician at the Boston State Hospital. In 1928, he was appointed assistant superintendent of that hospital, where he combined clinical psychiatric work with research. Under guidance of Dr. James V. May, then superintendent of the Boston State Hospital, he developed into a capable clinical psychiatrist and an efficient administrator. From 1925 to 1933, he actively participated in research work carried at the Research Department of that hospital, under the guidance of Dr. Abraham Myerson, with whom he published several important papers. Their technic for obtaining blood from the internal jugular vein and internal carotid artery was a particularly outstanding contribution, for it offered a new method for the study of cerebral metabolism in nervous and mental diseases. This method became widely known and served as a basis of important contributions in this country and abroad. In 1929 he was appointed assistant to the Commissioner of Mental Diseases, and in 1933 became the first superintendent of the Metropolitan State Hospital, then in the process of construction and organization. During the nine years of his superintendentship he not only applied to this institution the high standards of psychiatric hospital administration for which our state has a long-standing and countrywide reputation, but with courage and energy broadened the functions of the state psychiatric hospital as a center of research and teaching in the care and treatment of the mentally ill. Thus, he designed and developed at the hospital the Medical and Surgical Centre of 400 beds as a complete general-hospital unit, which was approved by the American College of Surgeons in 1936. This was the first medical and surgical unit of a state psychiatric hospital to be approved in New England. He developed a patients' library as a special department under a trained librarian, not merely as a diversional facility but as a part of the program of psychotherapy, the reading material being selected in accordance with the special psychologic requirements of each patient. He made special efforts to break the wall of psychologic and social isolation of the patients under prolonged treatment at the hospital. The theatricals and garden parties, and the exhibits of the patients' paintings, carvings and crafts held annually at the Metropolitan State Hospital, were favorably noted by the general press. He possessed outstanding abilities as a team builder and maintained high standards of morale and interest among the staff and employees of the hospital. In 1936, under the impetus of the establishment of the American Board of Neurology and Psychiatry for the certification of specialty, he organized postgraduate seminars in this branch of medicine. These have been held annually ever since and close to four hundred physicians — members of the staffs of psychiatric state hospitals and practitioners in Massachusetts and the adjoining New England states — have availed themselves of this educational opportunity. The seminars showed in a practical way how the teaching facilities of a state hospital can be effectively integrated with the teaching programs of university centers and medical schools to the advantage of large groups of physicians and students. Under his direction, the lectures of the seventh seminar, held during the fall and winter of 1941–1942, were transcribed and published in three volumes, each covering the lectures of one of the three semesters: "Military Neuropsychiatry," "General Psychiatry" and "General Neurology." The *Collected Lectures*, privately published at the Metropolitan State Hospital, have become widely known and are in great demand by young members of the profession, especially those who are in military service. He himself contributed much as a lecturer on administrative and clinical psychiatry at the seminars and as professor of clinical psychiatry at Tufts College Medical School.

In August, 1942, Dr. Halloran was called to take charge of the Neuropsychiatry Branch of the Office of the Surgeon General, being commissioned as a colonel in the Army of the United States. He accepted this call as a matter of duty to his country but hoped to return to the Metropolitan State Hospital after the war and to continue the work that he loved so much. While in Washington, he performed the difficult task of organizing the neuropsychiatric service of the Army during mobilization on an unprecedented scale. To his duties in military service, as usual, he gave all of himself. He died of a coronary occlusion on November 10, 1943, and was buried in the Arlington National Cemetery.

Dr. Halloran was a member of the American Medical Association, a fellow of the American Psychiatric Association and a member of the Amer-

ican Hospital Association. He was president of the New England Society of Psychiatry in 1940–1941, and president of the Massachusetts Occupational Therapy Association for two terms, 1939–1940 and 1940–1941. In 1938, he was representative from New England at the Conference on Behavior Problems of School Children in Washington, D. C. In 1939, he was a delegate of the Department of Mental Health at the American Psychiatric Convention. In 1940, he was a member of a civil-service panel for the selection of a hospital superintendent in Rhode Island. He was a member of the Dartmouth Alumni Association and the University Club of Boston, as well as president of the Belmont Rotary Club in 1940–1941. He belonged to Sigma Phi Epsilon, Alpha Kappa and Gamma Alpha fraternities.

P. I. Y.

MASSACHUSETTS MEDICAL SOCIETY

DEATHS

BARRY — Thomas A. Barry, M.D., formerly of Boston, died August 4, 1943, in the service of his country. He was in his thirty-fifth year.

Dr. Barry received his degree from Tufts College Medical School in 1936. He was a member of the Massachusetts Medical Society and the American Medical Association.

His mother survives.

CLARKE — Willis E. Clarke, M.D., of West Somerville, died February 23. He was in his fifty-seventh year.

Dr. Clarke received his degree from Tufts College Medical School in 1912. He was on the staff of the Cambridge City Hospital and Tufts College Medical School and was a lecturer for many years at the Boston Dispensary. Dr. Clarke specialized in diseases of the ear, nose and throat. He was a member of the Massachusetts Medical Society and the American Medical Association.

Two brothers and a sister survive.

SPELLISSY — Frank T. Spellissy, M.D., of Marlborough, died February 4. He was in his forty-ninth year.

Dr. Spellissy received his degree from Tufts College Medical School in 1919. He was a member of the staff of the Marlborough Hospital and a member of the Massachusetts Medical Society and the American Medical Association.

Two brothers survive.

WAR ACTIVITIES

INDUSTRIAL HYGIENE

"Fumes Fell 38 Workers"

Such were the headlines in all the Boston papers on December 11, 1943, when, according to the newspaper accounts, 38 women employed at a Cambridge plant had fallen unconscious from a mysterious gas.

Investigation by members of the staff of the Massachusetts Division of Occupational Hygiene revealed that the "mysterious gas" was carbon monoxide and that, of the 38 workers affected, only 8 required hospitalization for a single night. There were no fatalities or apparent sequelae. Atmospheric contamination with carbon monoxide occurred from the use of two brazing furnaces and a combustion chamber in which illuminating gas was reduced to a mixture of carbon dioxide 8 per cent, carbon monoxide 12 per cent, and nitrogen 80 per cent. A leak was found around the sight glass of the combustion chamber, but the primary cause of the poisonings was the breakdown of a ventilating fan.

The plant was immediately shut down, and the furnaces were run experimentally at night. Within one hour, concentrations in excess of 100 p.p.m. were found with a temporary 16-inch fan in operation; twenty minutes after the fan was stopped, concentrations in the workroom reached 280 p.p.m. Steps instituted to prevent a recurrence included more adequate exhaust ventilation, a carbon monoxide alarm and segregation of the furnaces from the main workroom.

The moral of this story would seem to be that a situation involving an extremely "close call" for a sizable group of workers might at any time be duplicated in many plants in Massachusetts and other states, and that operations such as the one in question call for more attention than they have been getting. — Reprinted from *Industrial Hygiene News Letter* (January, 1944).

MISCELLANY

NOTES

On February 28, Dr. Richard P. Strong, formerly professor of tropical medicine at Harvard Medical School and at present director of tropical medicine at the Army Medical School, Washington, D. C., was awarded a medal and an honorarium by the American Foundation for Tropical Medicine in recognition of his distinguished service in tropical medicine. The awards were made possible by a recent gift to the Foundation from the Winthrop Chemical Company, and will subsequently be given periodically for outstanding contributions in the field of tropical medicine, the medal to be known as the Richard Pearson Strong Medal.

The Trustees of Boston University have announced that Dr. Charles F. Branch, professor of pathology, has been appointed dean of Boston University School of Medicine. He will assume his new duties immediately, and succeeds Dr. Bennett F. Avery, who recently resigned to become director-general of public health in Iran. Dr. Branch has held a teaching position in the medical school for the past eighteen years, and has been professor of pathology since 1932.

CORRESPONDENCE

SIGNED VERSUS UNSIGNED BOOK REVIEWS

To the Editor: For many years I have had an interest in book reviews in medical journals. As a younger man not infrequently I wrote book reviews for the predecessor of the *Journal*, the *Boston Medical and Surgical Journal*; in later years I have been at the other end of the book-review problem, reading reviews of my own publications. In each capacity I have thought that signed reviews were preferable to anonymous ones.

A book review can be a real contribution to medical literature in its style and content; not infrequently this actually happens with reviews in the field of general literature. It is but natural that, if one carefully reads a book and then fairly and comprehensively discusses its contents, he will like to get credit for his work by his identity's being known. To realize that the medical reading world is going to see who wrote the review seems to me calculated to stimulate a reviewer to make a greater effort to produce something that will be a credit to the writer and to check any tendency to careless reviewing. It is my belief that a plan of having signed reviews will bring to the work more capable reviewers. As a reviewer I should have preferred to have my name appear.

As an author my experience has been that reviews are very helpful toward better subsequent editions, and that this is one of the important usefulnesses of a book review, the other being to indicate to the reading public the content of the book and its quality as a guide to the desirability of its purchase. With reviewers, including critical ones, I have often had both delightful and extremely helpful correspondence. So I like to know to whom to write. Journals that publish unsigned editorials often say they will forward your letter to the reviewer and so allow you to have the advantage that might come from correspondence with the reviewer. I have tried this; either my letter remained unanswered, or the answer from the anonymous reviewer somehow did not seem to give the satisfactory results that came from correspondence with

a known reviewer, with whom you talked by letter as man to man.

Usually it is said that the anonymous reviewer is freer to criticize. That may be true, but it has not been my experience, for, by and large, signed reviews of my books have been just as critical as the anonymous ones, possibly even more so. My reviewers have not appeared to be afraid to be critical, and their criticisms have helped me, particularly when, by correspondence, I obtained elaboration of the criticism toward a better understanding of it on my part and in addition, what has been very helpful, numerous criticisms that had not been included in the published review. For the author I think signed reviews are a greater help than the unsigned.

I take it that the chief object of a book review is to be a help in the selection of books to purchase. Certainly, if the reader is aware of whose opinion he has seen, that opinion will carry increasing weight in proportion to the position in the medical world held by the writer of the review. It is my belief that in general a higher-grade medical man can be obtained to write signed reviews and that this type of man is entirely willing to say what he thinks of a book and less apt to be fulsomely uncritical of a book deserving condemnation rather than praise.

It seems to me that the policy long practiced by the *Journal* is not conducive to obtaining reviews of so high a grade of excellence or so helpful to readers and authors as would come from having signed reviews. Anyhow, why not try the other way for a while to see whether or not it is a better way rather than, without trial of the other way, persist in the present practice? If it does not seem preferable after a few months of trial, then return can be made to anonymity.

HENRY A. CHRISTIAN, M.D.

20 Chapel Street
Brookline, Massachusetts

MIDDLESEX UNIVERSITY SCHOOL OF MEDICINE

To the Editor: I am sure your readers are glad that the secretary of the Society has made public in your columns "the exact policy adopted by the Council on Medical Education and Hospitals of the American Medical Association with regard to students from schools not on its approved list being accepted by approved hospitals for clinical instruction."

They may perhaps be interested in a statement which makes clearer than anything I have seen published some of the conditions under which this policy was formulated.

In June, 1942, I requested permission of the Council on Medical Education and Hospitals to make representation in person to it, concerning the question of penalizing action by the Council, in the case of a hospital approved by it if such hospital accepted as clinical clerks students from a school not approved by the Council. I had been told by a number of hospitals that they could not accept Middlesex students because the American Medical Association would not approve, but I had found by the spring of 1942 no authoritative written or printed statement supporting the contention of the hospitals.

Permission was granted to me and at the meeting in Atlantic City I told the Council briefly what I had been doing in Massachusetts about substandard medical education and especially what I had undertaken to do at Middlesex, and I asked the question to which I have referred, namely, "Will the Council withdraw approval of a hospital approved by it for the training of interns if such hospital accepts as clinical clerks the students from a school not approved by the Council?"

The letter from the Council, dated June 7, 1942, did not answer my question but contains the following sentence, "The Council did not feel justified in offering any approval or even encouragement in connection with your efforts, but we will await with interest any further report."

I laid the matter before the president (or maybe it was the president-elect) of the American Medical Association. He said in substance, "At least you are entitled to an answer to your question." So I wrote again, referring to what I called a "misunderstanding." The reply, dated June 19, 1942, reads in part as follows:

> I am sorry if any misunderstanding has resulted from my letter of June 7. In connection with the approval of hospitals for internships, the hospitals deal individually with the Council on Medical Education and Hospitals. As you fully realize, conditions vary greatly in the different hospitals and many of them are approved or removed from the list temporarily because of certain conditions existing at a specific time. The interest of the Council in this connection is solely the maintenance of a satisfactory educational program for the training of interns.
>
> Hence if a hospital maintains such satisfactory standards the Council would not consider it within its field to decide whether or not it should accept students from any medical school as clinical clerks. . . .
>
> Because of the possibilities of misunderstanding and because of the varying conditions existing in hospitals approved for internships, together with the responsibilities of the Council in the field of undergraduate medical education, the Council did not feel justified in making any general overall statement.

In spite of this disclaimer on the part of the Council, that answer sounds like a statement of policy. But it seems to have been in some respects not the right answer as is shown by the statement of the "exact policy of the Council" published in the January 20 issue of the *Journal*. I have been informed by the secretary of the Council that this policy was adopted on November 7, 1943.

It is the paragraph which I have quoted from the letter of June 7, 1942, which is most significant as indicating the background of the discussion. It is so important that I quote it again, "The Council did not feel justified in offering any approval or even encouragement in connection with your efforts."

What are my efforts? For eleven years as secretary of the Board of Registration in Medicine my efforts had been directed toward the elimination of substandard medical education, not, be it noted, to the elimination of medical schools, and I proposed in connection with Middlesex University School of Medicine to continue my efforts by attempting to improve that particular school.

It is not necessary to explain why I had not asked the approval or encouragement by the Council for *my* efforts except to point out that my own conscience was clear, to me a deciding factor.

If the justification for the existence of the Council is *their* effort to improve medical education, why their disclaimer as to "approval or even encouragement"? The principles on which my proposed action was to be based are highly orthodox, although I hope that some novel practices may be introduced in the course of time. Why, then, could no approval or even encouragement of *efforts* be offered?

But there the record stands. "The Council did not feel justified in offering any approval or even encouragement in connection with" my efforts to eliminate substandard medical education. Perhaps some of your readers will find the record illuminating. As the French are reported to say, "It gives one to think furiously."

STEPHEN RUSHMORE, *Dean*

Middlesex University School of Medicine
Waltham 54, Massachusetts.

BOOK REVIEWS

The Compleat Pediatrician: Practical, diagnostic, therapeutic and preventive pediatrics. By Wilburt C. Davison, D.Sc., M.D. Fourth edition. 8°, cloth, 256 pp. Durham, N. C.: Printed by Seeman Printery for Duke University Press, 1943. $3.75 by check with order, or $4.00 on credit.

This fourth edition differs little from previous editions, having been merely brought up to date so far as is possible with rapidly advancing medical information.

One's first impression on examining a book of this sort is one of bewilderment and helplessness. When, however, one has mastered the method of searching for information, the original emotion changes to one akin to awe that so much valuable, utilizable, up-to-date information is so readily available in such a small volume. In particular, there are many accurate and valuable tables, which not only include growth and developmental figures but also assist in differential diagnosis. The concise paragraph on therapeutics following each group of diseases is of considerable assistance to the practicing physician.

In the reviewer's opinion the chief worth of this remarkable volume lies in its value as a book of reference to the student

and intern and to the general practitioner who may be confronted with pediatric problems.

Burns, Shock, Wound Healing and Vascular Injuries. Prepared under the auspices of the Committee on Surgery, Division of Medical Sciences, National Research Council. *Military Surgical Manual V.* 8°, cloth, 272 pp., with 20 illustrations. Philadelphia and London: W. B. Saunders Company, 1943. $2.50.

The present war has brought into the armed services certain doctors who are ill equipped to deal with wounds and their many complications. The spread of specialization has made it impossible to recruit the large number of men who are needed and at the same time qualified to deal with war wounds. In the interest of efficiency, standardization of front-line and base-hospital practice is essential. The twofold purpose of instructing the less experienced and of unifying practice among various units is well served by the military surgical manuals published by the National Research Council.

The volume on burns, shock, wound healing and vascular injuries is compiled by experts. It is thorough, concise and intensely practical. The keynote of the articles is proper treatment given early. Thus in severe burns the use of skin grafting is begun early; in shock, replacement therapy commences with the suspicion of shock; and in wounds, débridement is used within a few hours after injury.

Some of the problems discussed have not received their final solutions. The surface treatment of burns remains in a chaotic state. After outlining many measures of treatment the authors state:

> It would be simple if one could be dogmatic and advise the use of one method, for example application of tannic acid, in treatment of all burns. However, it is now evident that it is unwise to try to apply any one method to burns of all degrees in all anatomic situations. Many other factors enter into the choice of local treatment. These include the availability of materials, time and space for certain of the methods, duration of time injury and so on. . . . Further experience may change the indications but possibly not the details of procedure of these methods.

The chapters on shock and fluid replacement are necessary for the war surgeon but contain much the same material as any recent volume on surgery. The chapter on skin grafting for contractures following burns is itself worth the price of the book. It is brief and yet has such a wealth of detail that one not widely experienced in plastic surgery can easily follow the procedures described. It will be of great interest to anyone doing general or plastic surgery.

Allergy. By Erich Urbach, M.D. With the collaboration of Philip M. Gottlieb, M.D. 4°, cloth, 1073 pp., with 395 illustrations and 59 tables. New York: Grune and Stratton, 1943. $12.00.

This book covers the subject of allergy from almost every viewpoint and is really an encyclopedia on the subject rather than a textbook. The author presents in considerable detail the story of allergy from its genesis to the present and covers it in a most interesting and readable manner. The author in the preface states that he has attempted to give an impartial presentation of the conflicting views on controversial questions. He has succeeded admirably and presents his facts concisely and clearly.

The book is primarily one for the allergist, although certain chapters will have considerable interest for the general practitioner and specialists in other fields. Chapter 2, dealing with the basic principles of allergy, clarifies many of the difficulties of those unacquainted with the theories of this condition. This chapter and Chapter 19, devoted to the allergic diseases of the upper respiratory tract, should be valuable reading for most practitioners of medicine. One of the most interesting chapters is Chapter 23, which deals with allergic skin diseases, conditions that surely confront every physician, whether he is a general practitioner or specialist, sometime during his career. The facts in this chapter are presented with clearness, and the illustrations add considerably to the value of the text. In itself it constitutes a textbook that may well be read with profit by anyone seeking knowledge on the complex problems of allergic skin diseases.

Taken as a whole, although a bit unwieldy in size and voluminous in text, the book is a valuable contribution to the study of allergy and to the practice of this specialty. It certainly will be a desirable addition to the library of every practicing allergist and will earn a place for itself as a reference book in the library of the general practitioner.

Body Poise. By Walter Truslow, M.D. 8°, cloth, 312 pp., with 96 illustrations. Baltimore: The Williams and Wilkins Company, 1943. $4.50.

The writer has produced a useful treatise on physical education. The anatomy and kinesiology involved in maintaining good poise of the body is described in detail. There are helpful chapters on static disabilities of the feet, on the recording and treatment of faulty posture and on lateral curvature of the spine. Various sports are analyzed in relation to posture. This book concludes with a glossary of anatomical terms to aid those unfamiliar with the nomenclature. This book should be of value to the physical educator and to the physiotherapeutist.

A Manual of Clinical Therapeutics: A guide for students and practitioners. By Windsor C. Cutting, M.D. 12°, cloth, 609 pp. Philadelphia and London: W. B. Saunders Company, 1943. $4.00.

This is a compact, complete manual on treatment easily applicable to the care of disease in its wide range. It is well set up, and is based on the clinical and teaching experience of the author at Stanford, London and Johns Hopkins. It can be highly recommended as a textbook on clinical therapy.

Essentials of Syphilology. By Rudolph H. Kampmeier, M.D. With chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. 8°, cloth, 518 pp., with 87 illustrations and 52 tables. Philadelphia: J. B. Lippincott Company, 1943. $5.00.

This text presents all that its author claims. It is an excellent presentation of the concept of syphilis as a systemic disease. It stresses the value of complete history-taking and thorough physical examination, and emphasizes what all syphilologists have learned by experience — namely, that a clinical diagnosis must be supported by darkfield or serologic evidence of syphilis.

The reviewer believes that careful study of the clinical manifestations in the early stages of syphilis needs more consideration than the author stresses, because the future care of the patient depends on the ability to recognize these lesions so that they will not be mistaken for those of late syphilis. The reviewer also believes that a diagnosis of syphilis cannot be made on two positive serologic tests alone. Furthermore, older syphilologists will not agree with the author's opinions in certain controversial questions — for example, the treatment of patients with a history of twenty years' duration who have no clinical signs.

There are other minor points to which the syphilologist might take exception; the book is written, however, for the student and the general practitioner, and the reviewer recommends it as a practical, comprehensive guide for diagnosis and proper treatment. The discussions of the medical aspects, prevention and control of syphilis are carefully presented, and the suggested methods of therapy are authoritative. The book is easily read, well printed and abundantly illustrated, and will make a useful addition to the library of the student, general practitioner or specialist.

Whooping Cough. By Joseph H. Lapin, M.D. 8°, cloth, 238 pp., with 25 tables. Springfield, Illinois: Charles C Thomas, 1943. $4.50.

The author brings into this book his own wide experience in the prevention and care of whooping cough, as well as an extensive review of the literature. The chapters on bacteriology, pathology and immunity reflect his intimate knowledge of the subject. The chapters on the prophylaxis of non-exposed children and of contacts are sound expositions of highly debatable matter. Here, as in the chapter on treatment, he keeps his feet well on the ground and points out what is based on pure speculation and what is of proved value. Furthermore, he gives facts and figures to show the relative value of different methods of dealing with this extremely variable disease. The only criticism one can make is that the author seems to have hurried over the chapters on complications and on public health recommendations. It is to be hoped that in subsequent editions these chapters will be brought up to the high level of the rest of the work. This book should be invaluable to every pediatrician and school physician and to all practitioners who are confronted with the problem of whooping cough.

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